

حمل الآن

مجانا وحصريا

المراجعة رقم (1)

الترم الاول





Final Revision

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✱ **(1) Write the scientific term :**

- 1) The continuous decrease in the number of a certain species of living organisms, without compensation until they all die out.
- 2) Traces and remains of old living organisms that are preserved in the sedimentary rocks.
- 3) Safe places that are specified to protect the endangered species in their homeland.
- 4) A charged layer reflects radio waves.
- 5) The ability of the atom in a covalent molecule to attract the electrons of the chemical bond towards itself.
- 6) Replacing part by part, the wood material of the trees by silica to form petrified fossils.
- 7) The continuous increase in the temperature of the Earth's near-surface air.
- 8) The region between stratosphere and mesosphere at which the temperature remains constant.
- 9) The halogen which exists in a liquid state.
- 10) The death of all members of certain species of living organisms.
- 11) A type of ultraviolet radiations that penetrates the ozone layer by a percentage 100%
- 12) The weight of air column of an atmospheric height above a unit area.
- 13) A table in which the elements are arranged according to their atomic numbers and the way of filling the energy sublevels with electrons.
- 14) It is a series in which metals are arranged in a descending order according to their chemical activity.
- 15) addition of any substance to the water which causes continuous gradual change in water properties affecting the health and the life of living creatures.

- 16) A type of ultraviolet radiations that is absorbed (95%) by the ozone layer.
- 17) Metals are arranged descendingly according to their chemical activity.
- 18) The apparatus which is used in water electrolysis.
- 19) A unit used for measuring ozone degree.
- 20) A bond that exists between water molecules.
- 21) The horizontal rows in the modern periodic table.
- 22) The radioactive element which is used in food preservation.
- 23) The decrease in the thickness of ozone layer.
- 24) The separating region between troposphere and stratosphere.
- 25) The gas which is collected at the cathode in water electrolysis.
- 26) The semi-conductor element which is used in electronics industry.
- 27) A liquid metal acts as a heat conductor in nuclear reactors for generating electricity.
- 28) The kind of bond which binds oxygen atom with hydrogen atom in water molecule.
- 29) A phenomenon that occurs due to the increase in the percentage of CO₂ gas and leads to
- 30) Colored bright curtains seen at the two poles.
- 31) A layer which plays an important role in wireless communications.
- 32) A phenomenon that appears as brightly coloured light curtains seen at both poles of the Earth.
- 33) The solidified resinous matter, which was secreted by pine trees during old geologic ages.
- 34) The block that contains the series of lanthanides and actinides.
- 35) An atmospheric layer at which the air moves vertically.

- 36) The strongest metal in group (1A)
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- 37) type of ultraviolet radiation absorbed completely (100 %) by the ozone layer.
-
- 38) Fossils of living organisms lived for a short time in the past in a wide geographical range then became extinct.
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- 39) A unit that measures the degree of ozone.
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- 40) The elements that occupy the middle block (d) in the periodic table.
-
- 41) An area where the atmospheric envelope is inserted in outer space.
-
- 42) Elements where their valency shell contains more than four electrons.
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- 43) A molecule produced from the union of an oxygen atom and its molecule.
-
- 44) A bond that exists between water molecules.
-
- 45) A device used to measure the elevations above sea level.
-
- 46) Safe areas established to protect the endangered species in their homeland.
-
- 47) The product of dissolving nonmetallic oxides in water.
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- 48) Weak electrostatic attraction that arises between the molecules of the polar compounds.
-
- 49) The measuring unit of the atomic size of an element.
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- 50) The number of protons inside the nucleus of the atom of an element.
-
- 51) The halogen which exists in a solid state.
-
- 52) The scientist who discovered that the atom contains positive protons in the nucleus.
-
- 53) Elements which have properties of metals and nonmetals.
-
- 54) Adding any substance to the water which changes its properties, affects the health and life of living organisms.
-
- 55) Two magnetic belts surrounding ionosphere and play an important role in scattering harmful charged cosmic radiations.
-

***(2) Choose the right answer:**

1.The oxide which dissolves in water and produces an acid is

- a. MgO b. FeO c. CuO d . CO₂

2.The gas which is evolved on reacting alkali metals with water is

- a. oxygen. b. nitrogen. c. hydrogen. d. helium.

3.The volume of hydrogen gas evolving from water electrolysis is the volume of oxygen gas .

- a. equal to b. twice c. half d. four times

4.One dobson unit is defined as

- a. 3 mm. b. 0.1 mm. c. 0.01 mm. d . 2mm.

5.Elements of group (7 A) are known as

- a. inert gases. b. alkali metals.
c. halogens. d. alkaline Earth metals.

6.Meteors are burnt in layer.

- a. ionosphere b. stratosphere c. mesosphere d. thermosphere

7.Elements of the same period in the modern periodic table have the same

- a. number of energy levels. b. atomic number.
c. number of electrons in the outermost energy level. d. valency.

8..... protectorate is the first one established in Egypt.

- a. Ras Mohamed b. Wadi Hetan c. Saint Catharine d. Petrified forest

9.Metal oxides are oxides.

- a. acidic b. basic c. both of them d. no correct answer

10.All of the following are greenhouse gases except

- a. CO₂ b. O₂ c. N₂O d. CH₄

11.There are bonds between water molecules.

- a. ionic b. covalent c. hydrogen d. metallic

12.The degree ozone layer is measured by a unit called

- a. km. b. Dobson. c. nanometer. d. mm

13.Fossils are often found in rocks.

- a. metamorphic b. volcanic c. sedimentary d. igneous

14.The coldest atmospheric layer is

- a. troposphere. b. stratosphere. c. mesosphere. d. thermosphere.

15..... react very instantly with water and hydrogen gas evolves.

- a. K and Na b. Cu and Ag c. Zn and Fe d. Ca and Mg

16..... is a polar compound.

- a. Petrol b. Water c. Alcohol

17.The main energy levels discovered by Bohr in the atom are

- a.7 b. 5 c. 3

18.The first layer in the atmospheric envelope above the sea level is

- a. mesosphere. b. stratosphere. c. troposphere.

19.Mammoth was preserved in

- a. resinous matter. b. snow. c. mud sediments.

20.Satellites orbit in layer.

- a. stratosphere b. exosphere c. mesosphere d. thermosphere

21.Which of the following fossils indicates that the environment, where they lived was a hot and rainy tropical environment ?

- a. Nummulites fossils. b. Ferns fossils. c. Coral fossils. d. Archaeopteryx fossils.

22.All of the following are ozone pollutants except

- a. methyl bromide gas. b. CO₂ c. halons. d. CFC_s

23..... is located between stratosphere and mesosphere.

- a. Tropopause b. Stratopause c. Mesopause d. Thermopause

24..... is one of the most important causes of extinction in the recent ages.

- a Volcanic eruption b. Falling of icebergs
c. Falling of meteorites d. Overhunting and environmental pollution

25.Which of the following fossils play an important role in petroleum exploration ?

- a. Foraminifera and Radiolaria.
b. Foraminifera and trilobite.
c. Nummulites and ammonites.

26.The is/are used in preservation of agricultural crops.

- a. methyl bromide gas b. halons c. nitrogen oxide

27. Which of the following fossils indicates that the environment, where they lived was clear warm and shallow seas ?

- a. Nummulites fossils . b. Ferns fossils. c. Coral fossils.

28. The scientist had discovered the main energy levels.

- a. Moseley b. Bohr c. Hofmann d. Mendeleev

29. The atomic number of an element that exists in group (7A) and period (2) is

- a. 12 b. 7 c. 9 d. 17

30. Each period in the periodic table starts with a/an

- a. metal. b. metalloid. c. nonmetal. d. inert gas.

31. is considered from halogens.

- a. Sodium b. Chlorine c. Helium d. Calcium

32. Ozone layer is found in layer.

- a. troposphere b. stratosphere c. mesosphere d. thermosphere

33. Complete body fossils of insects are found preserved in

- a. amber. b. snow. c. ocean.

34. All of the following gases are greenhouse gases except

- a. CO₂ b. O₂ c. CH₄

35. The density of ice is the density of water.

- a. less than b. more than c. equal to

36. The normal atmospheric pressure at the sea level equals millibar.

- a. 1013.25 b. 76 c. 1.013

37. From the endangered species is

- a. dinosaur. b. bald eagle. c. dodo bird. d. quagga.

38. All of the following metals react with water except

- a. K b. Cu c. Na d. Mg

39. Bilharzia is from the harms resulted from water pollution.

- a. chemical b. thermal c. biological d. radiant

40. fossils indicate the environment where they lived was tropical , hot and rainy.

- a. Ferns b. Nummulites c. Coral d. Dinosaurs

41. Eating fish, which contain high concentration of causes the death of brain cells.

- a. mercury b. arsenic c. lead d. iron

42. The replaces the wood material , part by part of an old tree.

- a. plastic b. iron c. silica d. copper

43. is an example of microfossils.

- a. Mammoth b. Fern c. Foraminifera d. Coral

44. The air in troposphere layer moves

- a. horizontally. b. vertically. c . inclined. d. no right answer.

45. Which of the following elements is located in the third period ?

- a. ${}_{19}\text{K}$ b. ${}_6\text{C}$ c. ${}_3\text{Li}$ d. ${}_{15}\text{P}$

46. Bilharzia is due to the pollution of water.

- a. biological b. thermal c. chemical

47. The atomic radius is measured in

- a. nanometer. b. picometre. c. kilometre.

48. A fossil that plays an important role in petroleum exploration is

- a. Morgan . b. nummulites. c. foraminifera.

49. Ice crystals have shape.

- a. tetragonal b. pentagonal c. hexagonal

50. The element, whose atomic number is (15) is similar in its chemical properties as the element whose atomic number is

- a. 5 b. 7 c. 17 d. 19

51. Meteors are formed in

- a. thermosphere. b. mesosphere. c. stratosphere. d. troposphere.

52. Microfossils like

- a. mammoth. b. ferns. c . foraminifera. d. archaeopteryx.

53. Ozone layer prevents (100 %) of ultraviolet rays from passing to the Earth.

- a. near b. medium c. far d. (a) and (b) together

54. From the complete body fossils is

- a. mammoth. b. nummulites. c. fish.

55.The number of elements in the Earth's crust equals

- a. 118 b. 92 c. 120

56..... is/are used in extinguishing fires.

- a. Methyl bromide b. Halons c. Nitrogen oxides d. UV radiation

57.The second layer of atmosphere is called

- a. mesosphere. b. troposphere. c. stratosphere. d. thermosphere.

58.The transition elements start to appear from the beginning of the period.

- a. second b. third c. fourth d. fifth

59.All of the following are from endangered species except

- a. papyrus plant. b bald eagle. c. quagga. d. rhinoceros.

60.p-block contains groups.

- a. 10 b. 2 c. 6 d. 8

61.The inert gas that has the same electronic structure as (Na^+) is

- a. $_{10}\text{Ne}$ b. $_2\text{He}$ c. $_{18}\text{Ar}$ d. $_{17}\text{Cl}$

62.The modern periodic table contains elements.

- a. 26 b. 92 c. 100 d. 118

63.Which of the following is an acidic oxide ?

- a. CO_2 b . MgO c. Na_2O d . FeO

64.Which of the following is a radioactive element which is used in food preservation ?

- a. Liquid sodium. b . Liquefied nitrogen.
c. Cobalt 60. d . Water.

65.Water has high boiling point due to the presence of bonds between its molecules.

- a. hydrogen b . ionic c. covalent d . metallic

66..... added group zero in his table for noble gases.

- a. Mendeleev b. Moseley c. Rutherford d . Einstein

67.Which of the following is the halogen that exists in a solid state ?

- a. Fluorine. b. Chlorine. c. Bromine. d. Iodine.

68. When putting a glass bottle completely filled with water in the freezer, it breaks because when water freezes its increases.

- a. temperature b. density c. volume d. acidity

69. Which of the following elements don't react with water ?

- a. K and Na b. Ca and Mg c. Zn and Fe d. Cu and Ag

70. What is the volume of hydrogen gas evolved from electrolysis of acidified water if you know that the volume of oxygen gas evolved is 2 cm^3 ?

- a. 1 cm^3 . b. 2 cm^3 . c. 4 cm^3 . d. 6 cm^3

71. From the extinct species is

- a. dodo bird. b. lion. c. panda.

72. The device that is used for determining the elevation from sea level is

- a. aneroid . b. altimeter. c. thermometer.

73. The atmospheric pressure on the top of a mountain is the atmospheric pressure at the sea level.

- a. more than b. less than c. equal to

74. The transitional elements start to appear from period

- a. 2 b. 3 c. 4 d. 5

75. An example of microfossils is

- a. mammoth. b. ferns . c. radiolaria. d. archaeopteryx.

76. When sodium reacts with water gas evolves.

- a. N_2 b. O_2 c. H_2

77. is considered from halogens.

- a. Sodium b. Chlorine c. Helium

✱(3) Complete the following :

1. Most of weather phenomena happen in layer.
2. Transition elements appear from period numberin the modern periodic table.
3. Archaeopteryx is the link between birds and
4. The ozone layer doesn't allow the penetration of all ultraviolet rays.
5. is an example of polar compounds.
6. Increasing of mercury concentration in drinking water causes
7. Fluorine and chlorine exist in state.
8. atomic size is measured by , but atmospheric pressure is measured by
9. ultraviolet radiation has a effect and the infrared radiation has a effect.
10. Eating fish which contains high concentration of lead causes ,
but drinking water which contains high concentration of mercury leads to
11. The highest temperature layer in the atmosphere is and the least temperature
one is
12. Alkali metals are good conductors of and
13. The height of atmospheric envelope above sea level is km, while the normal
atmospheric pressure equals millibar.
14. $\text{CO}_2 + \text{H}_2\text{O} \rightarrow$
15. $\text{Br}_2 + 2\text{KI} \rightarrow$ +
16. Dodo bird is bird, while bald eagle isbird.
17. The scientist discovered the main energy levels in the atom.
18. There are bonds between water molecules.
19. The modern periodic table consists of horizontal periods and
vertical groups.

20. By increasing the atomic number in groups, the atomic size due to the increase in the number of
21. and are examples of polar compounds.
22. The valency of alkali metal elements is
23. and are endangered species.
24. Pure water boils at and freezes at
25. From the reasons of recent extinction are and
26. The strongest metallic element is found in group
27. The thickness of mesosphere layer is about km.
28. and are considered from ozone layer pollutants.
29. Fossils always exist in the rocks.
30. Elements in group (1A) are called alkali metals as their elements react with forming solutions.
31. The highest temperature layer in the atmosphere is and the lowest temperature one is
32. By increasing the atomic number, the value of metallic property in the groups of the periodic table.
33. Fluorine and chlorine exist in state, while iodine exists in state.
34. There are bonds between water molecules.
35. Elements that locate in the middle of the periodic table are called
36. Ozone layer is found in layer, while meteors are burnt in layer.
37. Elements of group (1A) are called , but elements of group (7 A) are called
38. The bond between hydrogen atom and oxygen atom in water molecule is bond, while bonds among water molecules are bonds.

39. The ultraviolet rays are three kinds which are , and
40. and are metals which don't react with water.
41. Archaeopteryx represents the link between and
42. Elements of s-block are located on the side of the periodic table and they are arranged in groups.
43. The thickness of stratosphere is , while that of mesosphere is
44. Moseley put and series below the periodic table.
45. Fossils are used in exploration and determination the age of
46. Ultraviolet radiations have effect, while infrared radiations have effect.
47. "d" block elements are called the elements.
48. and are from greenhouse gases.
49. Cobalt 60 has the ability to kill
50. and are from ozone layer pollutants .
51. The strongest nonmetal lies in group
52. When the atomic number increases in the same period, the metallic property
53. The safe areas established to protect endangered species are called
54. $\text{MgO} + \text{H}_2\text{O} \rightarrow \dots\dots\dots$
55. The satellites rotate around the Earth in layer.
56. is from the examples of polar compounds because the difference in electronegativity between its elements is relatively
57. Mendeleev arranged the elements ascendingly according to , while Moseley arranged them ascendingly according to
58. During the electrolysis of acidified water by Hofmann's voltammeter, the gas evolves at the anode, while the gas evolves at the cathode.

59. The number of groups in p-block isin modern periodic table.
60. Sodium reacts with water to producegas.
61. The measuring unit of atmospheric pressure is , while the measuring unit of ozone degree is
62. Elements of group (1A) are called
63. Most of weather features occur in layer.
64. Both sodium ($_{11}\text{Na}$) and potassium ($_{19}\text{K}$) are located in the samebecause they have the same number of
65. Ozone layer locates in layer.
66. Radiolaria fossil is an example of, but amber fossil is an example of
67. There are bonds between molecules of water
68. is an instrument used to determine the possible day weather, but to analysis the water by electricity.
69. Ultraviolet radiation has aeffect, and the infrared radiation has a effect.
70. From the extinct animals in the old agesand
71. Number of elements in Mendeleev's periodic table
72. Number of elements in the modern periodic table
73. Maximum number of energy levels
74. The angle between water molecules

✱(4) Correct the underlined words:

1	The ozone layer is found in <u>thermosphere</u> layer.	(.....)
2	<u>Aneroid</u> is an instrument used to determine the elevation of aeroplanes above sea level.	(.....)
3	Ice crystals have <u>round</u> shape	(.....)
4	Elements of <u>p-block</u> are organized in two groups.	(.....)
5	Meteors burn in <u>thermosphere</u> layer.	(.....)
6	Infrared radiation has a <u>chemical</u> effect.	(.....)
7	Transition elements start to appear in the <u>first</u> period.	(.....)
8	Increasing <u>O₂</u> concentration in the atmosphere produces the global warming phenomenon.	(.....)
9	<u>Mammoth</u> is an example of microfossils.	(.....)
10	Sodium oxide is from <u>acidic</u> oxides.	(.....)
11	<u>Wadi El-Hetan</u> protectorate is the first established natural protectorate in Egypt.	(.....)
12	<u>Fluorine</u> is the only liquid halogen.	(.....)
13	Archaeopteryx links between reptiles and <u>mammals</u> .	(.....)
14	<u>Sodium chloride</u> is from polar compounds	(.....)
15	<u>Chlorine</u> element has the smallest atomic size.	(.....)
16	<u>Chemical</u> pollution of water causes many diseases as typhoid and hepatitis.	(.....)

17	The <u>thermometer</u> is an instrument used to measure the atmospheric pressure.	(.....)
18	<u>Rutherford</u> discovered the main energy levels.	(.....)
19	<u>Oil</u> is a covalent compound dissolves in water.	(.....)
20	Each period in the periodic table starts with <u>inert gas</u> .	(.....)
21	An element which is located in the 3rd period and group (2A) , its atomic number is <u>8</u>	(.....)
22	Eating food containing high percentage of lead causes <u>blindness</u> .	(.....)
23	Radio waves are reflected and transmitted by communication centres in <u>stratosphere</u> .	(.....)
24	The elements with the same physical and chemical properties have been put in <u>horizontal periods</u> .	(.....)
25	All weather phenomena like rains , wind and clouds occur in the <u>ionosphere</u> .	(.....)
26	<u>Millibar</u> is the unit of measuring the ozone degree.	(.....)
27	Transition elements start from the <u>second</u> period.	(.....)
28	<u>Inert gases</u> have the properties of metals and nonmetals.	(.....)
29	<u>Hydrogen</u> used in preserving eye cornea.	(.....)
30	Fossils are often found in <u>igneous</u> rocks.	(.....)
31	Pure water has <u>acidic</u> effect on litmus paper.	(.....)
32	Ultraviolet radiation has <u>thermal</u> effect on the Earth.	(.....)
33	<u>Snow</u> is a solidified resinous matter secreted by pine trees.	(.....)

34	Sodium is used in making electronic slides.	(.....)
35	Cobalt 60 is used in preservation of cornea of eye .	(.....)
36	The ozone hole appears above the middle east .	(.....)
37	When the temperature of water decreases to less than 0°C , its density decreases and, so it floats on water surface in the form of ice crystals.	(.....)
38	Dobson assumed that the natural amount of the ozone equals 100 Dobson units .	(.....)
39	Alkali metals are bad conductors of heat and electricity.	(.....)
40	Bald eagle is from the birds that can't fly because of its small wings.	(.....)
41	Sodium is considered as the most active metal in the periodic table.	(.....)
42	Elements of group 1A are known as halogens .	(.....)
43	Covalent bond is a weak electrostatic attraction force which arises among water molecules.	(.....)
44	Coral fossils indicate that the environment where they lived was hot and rainy tropical environment.	(.....)
45	If the metal lost one electron or more, it will become a negative ion.	(.....)
46	The desert environment is an example of the complex ecosystem.	(.....)
47	Panda bear is considered from extinct species.	(.....)
48	Infrared radiation has a chemical effect.	(.....)

★(5) Give reason for:

1. Water molecule is from polar compounds.

.....

2. The global warming phenomenon has negative effects on Earth.

.....

.....

3. Simple ecosystem is affected strongly by the absence of one of its species .

.....

4. Dissolving of sugar in water although it is among covalent compounds.

.....

5. Water has high boiling point.

.....

6. Bromine cannot replace chlorine in sodium chloride.

.....

7. Reaction of potassium with water is stronger than that of sodium with water.

.....

8. Silicon slides are used in making electronics as computers .

.....

9. Magnesium oxide is a basic oxide.

.....

10.Ozone layer is formed in stratosphere.

.....

11.Complicated ecosystem is not affected much by the absence of one of its species.

.....

12.Cesium is the most active metal in group (1A).

.....

13.Sugar dissolves in water.

.....

14.Van-Allen belts play an important role in atmosphere.

.....

15.The lower part of stratosphere is suitable for flying aeroplanes.

.....

16.Liquefied nitrogen is used in preservation of the eye cornea.

.....

17.Cobalt 60 is used in food preservation.

.....

18.Elements of the same group have similar properties.

.....

19.Occurrence of extinction in the recent ages.

.....

20.Sodium is kept under the surface of kerosene.

.....

21.The atomic size decreases in periods by increasing the atomic number.

.....

22.Water density decreases on freezing.

.....

23.Chlorine replaces bromine in potassium bromide solution.

.....

24.Dodo bird was an easy target for hunters.

.....

25.The ozone layer acts as a protective shield for living organisms.

.....

26.Adding drops of dilute acid to water during its electrolysis.

.....

***(6) What happen if:**

1. Storing drinking water in plastic bottles.

.....

2. The overuse of methyl bromide as an insecticide.

.....

3. The resinous matter, which was secreted by pine trees falls on an insect.

.....

4. Overuse of Freon.

.....

5. Eating fish contains high concentration of lead.

.....

6. Putting a magnesium strip in a test tube containing oxygen.

.....

7. Dissolving magnesium oxide in water.

.....

8. passage of electricity in Hofmann's voltammeter containing acidic water.

.....

9. The pollution of water with animals and human wastes.

.....

10. There is no ionosphere layer at the end of thermosphere.

.....

11. Decreasing water temperature to less than 4°C.

.....

*** (7) Put (\checkmark) or (X) :**

- | | |
|--|-------|
| 1. Nonmetal oxides dissolve in water forming acidic solutions. | () |
| 2. Silicon slides are good conductors of electricity. | () |
| 3. The air moves vertically in the bottom part of the stratosphere. | () |
| 4. Alkali metals locate in group (2A) . | () |
| 5. Ice crystals have pentagonal shapes. | () |
| 6. In the period as the atomic number increases, the atomic size increases. | () |
| 7. The index fossil indicates the age of the sedimentary rocks . | () |
| 8. Mammoth and dinosaur are old extincted animals. | () |
| 9. Halogens are monovalent elements. | () |
| 10. Infrared radiations have chemical effect. | () |
| 11. The atomic size increases in the group by increasing the atomic number. | () |
| 12. Tropical forest is considered as simple ecosystem. | () |
| 13. Increasing the concentration of mercury in water causes blindness. | () |
| 14. Amber is a complete body fossil. | () |
| 15. Wadi El-Hetan protectorate is the first established protectorate in Egypt. | () |
| 16. The troposphere is the first layer in the atmospheric envelope. | () |
| 17. The millibar is the unit of measuring the ozone degree. | () |
| 18. The dinosaur is the most famous extinct species recently. | () |
| 19. Mesosphere is the layer which is responsible for burning of meteors. | () |
| 20. Ozone layer totally absorbs all kinds of ultraviolet radiations. | () |
| 21. Petrified woods look like rocks and are considered as fossils. | () |
| 22. Altimeter is a kind of barometers. | () |
| 23. Water and ammonia are non-polar compounds. | () |
| 24. Liquefied sodium is used in preservation of cornea of the eye. | () |
| 25. The atomic size decreases in periods as the atomic number increases. | () |
| 26. Lacking of plants on the Earth leads to the increase in the temperature. | () |
| 27. Halogens are from monovalent metals. | () |

28.Bohr had discovered the main energy levels.	()
29.Each period starts with a weak metal.	()
30.The ozone layer locates at altitude from 20 - 40 km above sea level.	()
31.Water and ammonia are from polar compounds.	()
32.Mendeleev arranged the elements ascendingly according to their atomic number.	()
33.Dodo bird and Quagga are from extinct species in the recent time.	()
34.Eating fish which contain high percentage of lead causes blindness.	()
35.Ozone layer is formed in troposphere layer.	()
36.The satellites revolve around the Earth in a region called the troposphere.	()
37.Tropical forest is an example of simple ecosystem	()
38.Water molecules are linked together by ionic bond.	()
39.Meteors are burnt in thermosphere layer.	()
40.Dobson is the unit of measuring the ozone degree.	()
41.The air moves horizontally in the lower part of the stratosphere.	()
42.Copper metal doesn't react with water.	()
43.The unit of measuring atomic radius is Dobson unit.	()
44.The pilots prefer to fly in mesosphere.	()
45.Hydrogen evolves at positive pole in Hofmann's voltameter.	()
46.Burning carbon produces basic oxide.	()
47.Coral fossils indicate that their environment was clear warm shallow seas.	()
48.Ferns fossils indicate that the environment where they lived was a sea floor.	()
49.Density of ice is more than that of water.	()
50.Stratosphere is the coldest layer in the atmosphere.	()
51.Ice crystals have pentagonal shapes .	()
52.Infrared radiation has a chemical effect.	()

✳(8) Mention one example for each of the following :

1. Halogen exists in a solid state.

.....

2. The strongest metallic element.

.....

3. Covalent compound cannot dissolve in water.

.....

4. Extinct bird in recent time.

.....

5. Greenhouse gases.

.....

6. Fossil of a complete body.

.....

7. Endangered plant.

.....

8. An extinct bird recently.

.....

9. Trace fossil.

.....

✳(9) Write the balanced chemical equations which express the following reactions :

1. Magnesium with dil. hydrochloric acid.

.....

2. Bromine with potassium iodide.

.....

3. The formation of ozone by the effect of ultraviolet radiation.

.....

4. Decomposition of acidified water by electricity into two elements hydrogen and oxygen.

.....

5. Reaction of sodium with water.

.....

6. Reaction of carbon dioxide gas with water.

.....

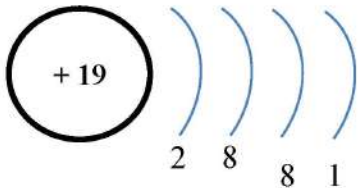
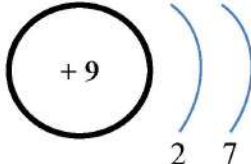
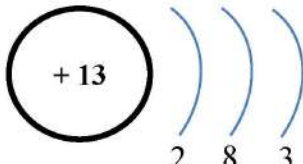
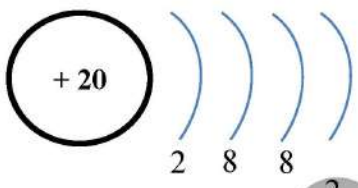
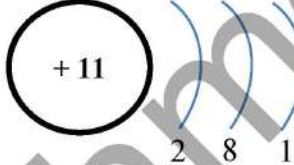
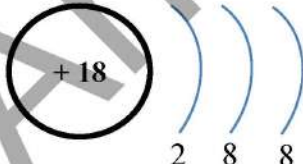
7. Reaction of chlorine gas with potassium bromide solution.

.....

8. Potassium iodide with bromine.

.....

*(10) Locate the position of the following elements in the modern periodic table with showing your steps :

	symbol	Location
1	$_{19}K$	 <p>Group : Period :</p>
2	$_9F$	 <p>Group : Period :</p>
3	$_{13}Al$	 <p>Group : Period :</p>
4	$_{20}Ca$	 <p>Group : Period :</p>
5	$_{11}Na$	 <p>Group : Period :</p>
6	$_{18}Ar$	 <p>Group : Period :</p>

*(11) Problems

1

Using the following diagram which represents a part of the periodic table, answer the following questions :

${}^1\text{H}$																		${}^2\text{He}$
3	X									5	6	Y	8	9	10			
11	12												Z	17	G			
19	M					N									35	36	Kr	

1. Write the letter(s) of the element(s) which is/are :

- (1) among transition elements.
- (2) located in period (3) and group (6A).
- (3) among noble gases.
- (4) considered among s-block.
- (5) considered among p-block.

2. Choose :

(1) The letter (Y) represents element.

a. ${}^9\text{F}$ b. ${}^8\text{O}$ c. ${}^{12}\text{Mg}$ d. ${}^7\text{N}$

(2) The letter (M) represents element.

a. ${}^{12}\text{Mg}$ b. ${}^{16}\text{S}$ c. ${}^{20}\text{Ca}$ d. ${}^{18}\text{Ar}$

(3) The letter (N) is located in block.

a. s

b. p

c. d

d. f

3. What is the atomic number of the elements (N) and (G) ?

.....

.....

.....

2

If the temperature at sea level is 24.5°C , find the temperature at the top of troposphere layer if its thickness is 13 kilometer.

.....

.....

.....

.....

3

"Ozone layer is found in the stratosphere layer, it's important to protect the life of organisms"

1. What is the average thickness of ozone layer in atmosphere ?
2. What is the only element that forms ozone gas ?

3. Complete :

- a. Ozone layer protects the Earth from the harmful effects of radiation.
- b. The thickness of ozone layer at STP is

4. Put (√) or (X): Ozone layer prevents penetration of all types of UV radiation.

.....

.....

.....

.....

.....

.....

.....

4

Calculate the temperature at the top of a mountain, which its height is 4 km. If the temperature at the base of that mountain is 24°C.

.....

.....

.....

.....

.....

5

Choose from column (B) what suits it in column (A) :

(A) Harms	(B) Pollutant
1. Death of brain cells.	a. lead.
2. Liver cancer.	b. sodium.
3. Blindness.	c. mercury.
	d. arsenic.

1-

2-

3-

6

From the following diagram which represents a part of the periodic table, answer the following questions :

[illegible]

[NB. The letters in the table don't represent the actual symbols of the elements]

1. Arrange the elements B, A, R, L descendingly according to the atomic size.
2. Complete the following :

The shaded part represents elements.

3. Write the letter(s) of the element(s) which :
- (a) Belong(s) to d-block. (b) is/are from inert gases.
- (c) Belong(s) to alkali metals.

7

Calculate the height of a mountain if the temperature at its base is (30°C) and at its top is (-9°C).

8

Study the following figure which represents a section of the periodic table, then answer :

														N
A										I	K		L	
	C								H					O
B			D		E	F	G		J			M		

[NB. The letters in the table don't represent the actual symbols of the elements]

Write the symbol(s) which indicate(s) :

- a. Halogens.
- b. Inert gases.
- c. The most active metal.
- d. Transition elements.

9

If the temperature at the sea level is 20.6°C . Find the temperature at the top of a mountain of height 2 km above Earth's surface.

.....

.....

.....

.....

10

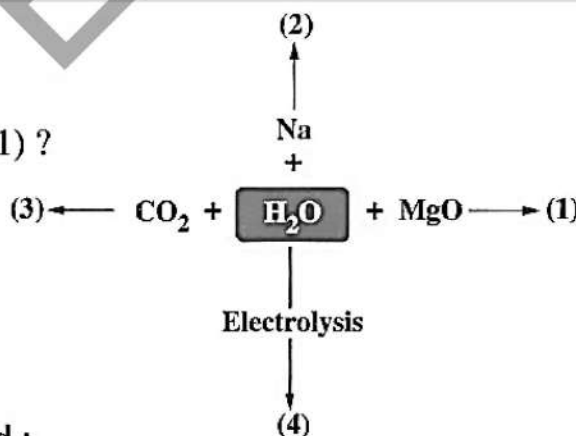
Calculate the atomic number of :

1. Element (X) is located in the 3rd period and group (2A).
 2. Element (Y) is located in the 1st period and group (1A).
-
-
-
-

11

In the opposite figure :

1. Write the products of reactions (1) , (2) , (3).
2. What is the type of solution resulted in reaction (1) ?
3. What is the effect of the product of reaction (3) on the litmus paper ? Why ?
4. In reaction (4), hydrogen gas evolves at , while oxygen gas evolves at



Mention the name of the scientist who discovered :

1. Normal degree of ozone.
 2. Protons inside nucleus.
 3. Added zero group to the periodic table.
 4. Main energy levels.
-
-
-
-
-
-
-
-
-
-

12

Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Liquid sodium	a. is used in preservation of food.
2. Liquefied nitrogen	b. is used in manufacture of electronic devices.
3. Cobalt 60	c. is used in nuclear reactors.
4. Silicon slides	d. is used in preservation of cornea of the eye.

1-

2-

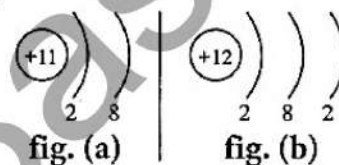
3-

4-

13

Study the opposite figures and answer the following questions :

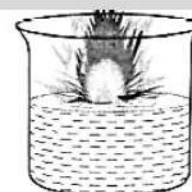
- Which figure represents a positive ion ?
- Which figure represents a neutral atom ?
- Determine the position of the atom in the periodic table.



14

The opposite figure shows the reaction of sodium and water :

- Write the balanced chemical equation of the reaction.
- Name the gas produced and how you can test about it.



15

A metallic element (X) lies in the third period and group (1A) in the modern periodic table:

- Draw the electronic distribution of this element.
- Mention the atomic number of this element.
- What is the block that this element belongs to ?
- What is the valency of this element ?

Model Answer

★ (1) Write the scientific term :

1. Extinction	11. Near ultraviolet	18. Hofmann voltmeter	28. Single covalent bond	36. Cesium	46. Natural protectorate
2. Fossil	12. Atmospheric pressure	19. Dobson	29. Global warming	37. Far ultraviolet	47. Acidic oxide
3. Natural protectorate	13. Periodic table	20. Hydrogen bond	30. Aurora phenomenon	38. Index fossil	48. Hydrogen bond
4. Ionosphere	14. Chemical activity series	21. Period	31. Ionosphere	39. Dobson	49. Picometer
5. Electronegativity	15. Water pollution	22. Cobalt 60	32. Aurora phenomenon	40. Transition element	50. Atomic number
6. Petrification	16. Medium ultraviolet rays	23. Ozone hole	33. Amber	41. Exosphere	51. Iodine
7. Global warming	17. Chemical activity series	24. Tropopause	34. F-block	42. Nonmetals	52. Rutherford
8. Stratopause		25. Hydrogen	35. Troposphere	43. Ozone	53. Metalloid
9. Bromine		26. Silicon		44. Hydrogen bond	54. Water pollution
10. Extinction		27. Sodium		45. Altimeter	55. Van Allen belt

★ (2) Choose the right answer:

1. D	9. B	17. A	25. A	33. A	41. C	49. C	57. C	65. A	73. B
2. C	10. B	18. C	26. A	34. B	42. C	50. B	58. C	66. B	74. C
3. B	11. C	19. B	27. C	35. A	43. C	51. B	59. C	67. D	75. C
4. A	12. B	20. B	28. B	36. A	44. B	52. C	60. C	68. C	76. C
5. C	13. C	21. B	29. C	37. B	45. D	53. C	61. A	69. D	77. B
6. C	14. C	22. B	30. A	38. B	46. A	54. A	62. D	70. C	
7. A	15. A	23. B	31. B	39. C	47. B	55. B	63. A	71. A	
8. A	16. B	24. D	32. B	40. A	48. C	56. B	64. C	72. B	

★ (3) Complete the following:

1. Troposphere	18. Hydrogen	34. Hydrogen	47. Transition	64. Group – electrons in outermost energy level
2. Four	19. 7 – 18	35. Transition element	48. CO ₂ – CH ₄	65. Stratosphere
3. Reptiles	20. Increase – energy levels	36. Stratosphere – mesosphere	49. Microbes	66. Microfossil – complete fossil
4. Far	21. Water – ammonia	37. Alkali metals – halogen	50. Halons – nitrogen oxide	67. Hydrogen
5. Water	22. Monovalent	38. Single covalent bond – hydrogen	51. 7A	68. Aneroid – Hofmann voltmeter
6. Blindness	23. Panda – blade eagle	39. Near , medium – far	52. Decrease	69. Chemical – thermal
7. Gas	24. 100 – 0	40. Ag – Cu	53. Natural protectorate	70. Dinosaurs – mammoth
8. Picometer – bar	25. Overhunting – climatic change	41. Reptiles – birds	54. Mg(OH) ₂	71. 67
9. Chemical – thermal	26. 1A	42. Left – two	55. Exosphere	72. 118
10. Death of brain cells – blindness	27. 35	43. 37 – 35	56. Water – high	73. 7
11. Thermosphere – mesosphere	28. Halons – nitrogen oxide	44. Lanthanides – actinides	57. Atomic weight – atomic number	74. 104.5
12. Heat – electricity	29. Sedimentary	45. Petroleum – sedimentary rocks	58. Oxygen - Hydrogen	
13. 1000 - 1013.25	30. Water - alkaline	46. Chemical – thermal	59. 6	
14. H ₂ CO ₃	31. Thermosphere – mesosphere		60. Hydrogen	
15. KBr + I ₂	32. Increase		61. Bar – Dobson	
16. Extinction – endangered	33. Gas – solid		62. Alkali metals	
17. Bohr			63. Troposphere	

★ (4) Correct the underlined words:

1. Stratosphere	12. Bromine	22. Death of brain cell	31. Neutral	42. Alkali metals
2. Altimeter	13. Birds	23. Ionosphere	32. Chemical	43. Hydrogen
3. Hexagonal	14. Water	24. Vertical group	33. Amber	44. Ferns
4. S-block	15. Fluorine	25. Troposphere	34. Silicon	45. Positive
5. Mesosphere	16. Biological	26. Dobson	35. Food	46. Tropical
6. Thermal	17. Barometer	27. Fourth	36. South pole	47. Endangered
7. Fourth	18. Bohr	28. Metalloid	37. 4 degree	48. Thermal
8. CO ₂	19. Sugar	29. Liquefied nitrogen	38. 300	
9. Radiolaria	20. Metal	30. Sedimentary	39. Good	
10. Basic	21. 12		40. Dodo birds	
11. Ras Mohamed			41. Cesium	

★(5) Give reason for:

- 1- Because of the electronegativity difference between its elements is relatively high
- 2- Because Global warming will cause:
 - 1 .Melting of polar ice which threats coastal areas – extinction of some polar animals like polar bear and seals.
 2. Severe climate changes Tropical hurricanes - Destructive floods - Drought waves – Forests fire.
- 3- Because it has small alternatives
- 4- Because sugar forms a hydrogen bond with water.
- 5- Due to the presence of hydrogen bonds between water molecules
- 6- Because bromine is less active than chlorine
- 7- Because its atomic size is greater than that of sodium and more active than it
- 8- Because it is semi-conductor
- 9- Because it dissolves in water forming alkalis which turn the color of litmus solution into blue
- 10- Because it contains a suitable amount of oxygen gas
- 11- Because it has many alternatives
- 12- Because the metallic property increases in groups by increasing the atomic number
- 13- Because sugar forms a hydrogen bond with water
- 14- Because these two belts play an important role in dispersing harmful charged cosmic radiation away from the Earth
- 15- Because it doesn't contain clouds or suffer from any weather disturbances and the air moves in this part horizontally
- 16- Due to the decrease of its boiling point.
- 17- Because it radiates (produces) gamma rays which prevent the reproduction of microbes
- 18- Because they have the same number of electrons in the outermost energy level.
- 19- Due to over hunting
- 20- Because they are metals which reacts strongly with water

$$2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$$
- 21- Because the attraction force between positive nucleus and the electrons in the outermost energy level increases, therefore atomic radius decreases , so atomic size decreases
- 22- Because it's volume increase
- 23- Because it is more active than bromine
- 24- Because it can't fly
- 25- Because it does not allow penetration of all far and medium ultraviolet radiations, which have very harmful effects
- 26- Because pure water is bad conductor of electricity

★(6) What happen if:

1. Plastic will react with chlorine gas leading to the increase in the infection rates by cancer
2. Ozone layer will be continuously eroded, and ozone hole will be bigger.
3. It will make complete fossil
4. Ozone layer will be continuously eroded, and ozone hole will be bigger.
5. It causes the death of brain cells.
6. It burns with bright light and magnesium oxide is formed. $2\text{Mg} + \text{O}_2 \xrightarrow{\Delta} 2\text{MgO}$
7. It forms alkalis which turn the color of litmus solution into blue. $\text{MgO} + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2$
8. **1. Acidified water decomposes by electricity into:**
 Oxygen gas evolves at the anode (because oxygen ions are negative)
 Hydrogen gas evolves at the cathode (because hydrogen ions are positive)
2- The volume of hydrogen is twice the volume of oxygen.
 Because water molecule H_2O is composed of two hydrogen atoms and one oxygen atom

$$\text{H}_2\text{O} \xrightarrow{\text{electrolysis}} \text{O}_2 + \text{H}_2$$
9. It causes many diseases such as: Bilharzia, typhoid and hepatitis.
10. We can't make wireless communications and broadcasting
11. Water molecules are collected and form crystal of hexagonal shape

★(7) Put (✓) or (X) :

1. (✓)	7. (✓)	13. (✓)	19. (✓)	25. (✓)	31. (✓)	37. (X)	43. (X)	49. (X)
2. (✓)	8. (✓)	14. (✓)	20. (X)	26. (✓)	32. (X)	38. (X)	44. (X)	50. (X)
3. (X)	9. (✓)	15. (X)	21. (✓)	27. (X)	33. (✓)	39. (X)	45. (X)	51. (X)
4. (X)	10. (X)	16. (✓)	22. (✓)	28. (✓)	34. (X)	40. (✓)	46. (X)	52. (X)
5. (X)	11. (✓)	17. (X)	23. (X)	29. (X)	35. (X)	41. (✓)	47. (✓)	
6. (X)	12. (X)	18. (X)	24. (X)	30. (✓)	36. (X)	42. (✓)	48. (✓)	

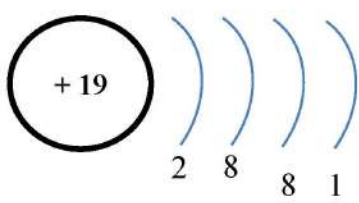
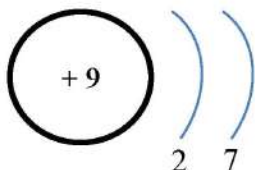
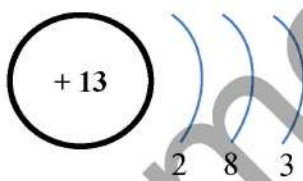
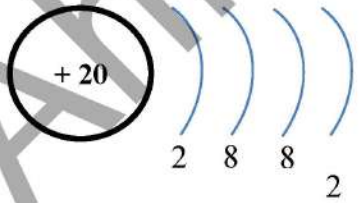
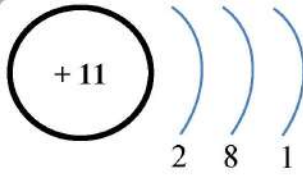
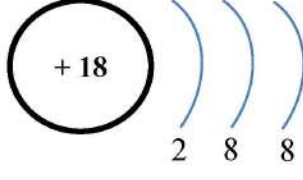
★(8) Mention one example for each of the following :

1. Iodine	4. Dodo bird	7. Papyrus
2. Cesium	5. CO_2	8. Dodo bird
3. Oil	6. Mammoth	9. Worm's tunnel

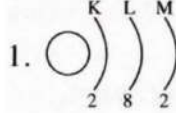
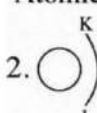
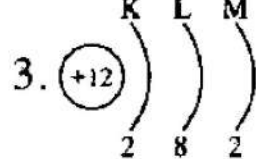
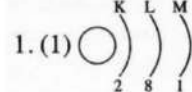
***(9) Write the balanced chemical equations which express the following reactions :**

- 1- $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2 \uparrow$
- 2- $\text{Br}_2 + 2\text{KI} \rightarrow 2\text{KBr} + \text{I}_2$
- 3- $\text{O}_2 + \text{O} \rightarrow \text{O}_3$
- 4- $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$
- 5- $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$
- 6- $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$
- 7- $\text{Cl}_2 + 2\text{KBr} \rightarrow 2\text{KCl} + \text{Br}_2$
- 8- $\text{Br}_2 + 2\text{KI} \rightarrow 2\text{KBr} + \text{I}_2$

***(10) Locate the position of the following elements in the modern periodic table with showing your steps:**

	symbol	Location
1	$_{19}\text{K}$	 <p>Group : 1A Period : 4</p>
2	$_9\text{F}$	 <p>Group : 7A Period : 2</p>
3	$_{13}\text{Al}$	 <p>Group : 3A Period : 3</p>
4	$_{20}\text{Ca}$	 <p>Group : 2A Period : 4</p>
5	$_{11}\text{Na}$	 <p>Group : 1A Period : 3</p>
6	$_{18}\text{Ar}$	 <p>Group : zero Period : 3</p>

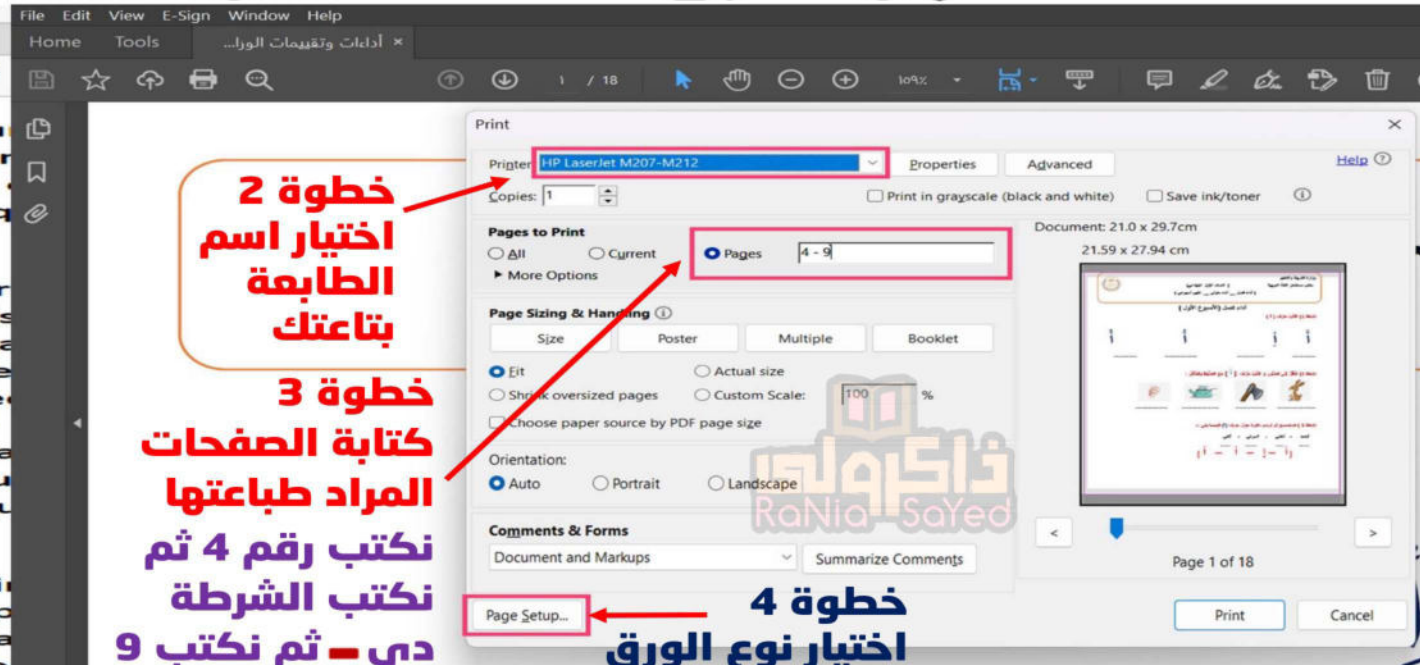
*(11) Problems

1	1. (1) N (2) Z (3) G (4) X and M (5) Y, Z and G 2. (1) d (2) c (3) c 3. (N) = 24 (G) = 18	9	- The temp. at the top of the mountain = the temp. at sea level – the decrease in temp. $= 20.6 - (2 \times 6.5)$ $= 20.6 - 13 = 7.6^\circ\text{C}$
2	- The decrease in temperature $= \text{Height (km)} \times 6.5^\circ\text{C}$ $= 13 \times 6.5 = 84.5^\circ\text{C}$ - The temperature at the top of troposphere $= \text{temperature at sea level} - \text{the decrease in temperature}$ $= 24.5 - 84.5 = -60^\circ\text{C}$	10	 1. Atomic number of element (X) = $2 + 8 + 2 = 12$  2. Atomic number of element (Y) = 1
3	1. 20 km thickness. 2. oxygen. 3. a. ultraviolet b. 3 mm. 4. (x)	11	1. (1) $\text{Mg}(\text{OH})_2$ (2) NaOH / H_2 (3) H_2CO_3 2. Alkaline solution. 3. It turns litmus paper into red, because it is an acidic solution. 4. the cathode - the anode.
4	- The temp. at the top of the mountain $= \text{the temp. at its base} - \text{the decrease in temp.}$ $= 24 - (4 \times 6.5) = 24 - 26 = -2^\circ\text{C}$	12	1. c 2. d 3. a 4. b
5	1. a 2. d 3. c	13	1. fig. (a). 2. fig. (b).  3. period (3) group (2A)
6	1. $A > B > L > R$ 2. Metalloid 3. (a) N (b) H (c) E, A and C	14	1. $2\text{Na} + 2\text{H}_2\text{O} \longrightarrow 2\text{NaOH} + \text{H}_2\uparrow$ 2. Hydrogen gas, by approaching a burning match to it, it burns with a pop sound.
7	- The temperature at the top of mountain $= \text{temperature at its base} - \text{the decrease in temperature}$ $- 9 = 30 - \text{the decrease in temperature}$ $- \text{The decrease in temp.} = 30 + 9 = 39^\circ\text{C}$ $\therefore 39 = \text{Height (km)} \times 6.5^\circ\text{C}$ So, height of the mountain = $\frac{39}{6.5} = 6 \text{ km.}$	15	 1. (1) (2) 11 (3) s-block. (4) Monovalent.
8	a. L and M b. N and O c. B d. D, E, F and G		

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



خطوة 1



خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6

حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

الترم الاول



Complete:-

1_ the modern periodic table consists of
Horizontal periods , and Vertical groups.

2_ the scientist Mendeleev arranged the elements
ascendingly according to While the
scientist Moseley arranged them ascendingly according to
.....

3_ the scientist Had discovered the main
energy levels

4_ elements ofblock are located on the left side of
the modern periodic table while the element of
.....block are located in the middle .

5_ elements ofblock are located on the right side of
the modern periodic table while the element of
.....block are located below the modern periodic table

6_ the modern number of group zero is
While that of group (5A) is

7_ In the modern periodic table elements which are
similar in their chemical properties are located in the
same

8_ in the modern periodic table d-block contains
.....elements

9_ transition elements start to appear from period number
..... And consists ofgroups

10_ modern periodic table consists of Horizontal periods and Groups .

11_ transition elements start to appear at the Period and they include Groups

12_ the scientist Mosely arranged the elements ascendingly according to their

13_ element are classified in the modern periodic table according to the increasing of theirand the way of filling of their With electrons .

14_ the number of elements of Mendeleev's periodic table is Elements

15_ the new number of group $6A$ is , and the new number of group zero is

16_ F-block consists of 2 series which are called And

17_ An examples of polar compounds are And

18_ during chemical reaction , metal tends toouter electrons taking the structure of the nearestnoble gas.

19_ Mosely putand Series below his periodic table.

20_ some metal oxide dissolve in water formingwhich turn litmus paper solution into

21_ sodium reacts with water forminggas evolves whichwith asound.

22_ $\text{CO}_2 + \text{H}_2\text{O} \rightarrow$

23_ $\text{Zn} + \dots \rightarrow \text{ZnSO}_4 + \dots \uparrow$

24_ both ofandare metals , which react at high temperatures only with hot water.

25_ when magnesium oxide dissolves in water , it gives, while carbon dioxide dissolves in water giving

26_ basic oxide are formed by the reaction ofwith oxygen , while Acidic oxides are formed by the reaction ofwith oxygen .

27_ is example of metalloid elements.

28_ the strongest nonmetal element locates in groupin the modern periodic table.

29_+..... $\xrightarrow{\text{Dilute}} \text{mgCl}_2 + \text{H}_2$

30_+..... $\rightarrow \text{H}_2\text{CO}_3$

31_ metal reacts with hot water vapor , whilemetal doesn't react with water

32_ from examples of amphoteric oxide.....

33_ sodium is kept under the surface ofto prevent its reaction with

Choose:-

1_ Is the scientist who arranged the elements in ascending order according to their atomic number

(**Rutherford / by Moseley / Mendeleev / Bohr**)

2_ Is the scientist who arranged the elements in ascending order according to their atomic weight

(**Rutherford / Moseley / Mendeleev / Bohr**)

3_ the scientist who left gaps in his table to be filled with suitable discovered elements in the future is

(**Rutherford / Moseley / Mendeleev / Bohr**)

4_ The scientist discovered that the nucleus of an atom contains positive protons

(**Rutherford / Moseley / Mendeleev / Bohr**)

5_ The transition elements starting to appear from periodand they lie at theof the periodic table

(**3-upper / 4-middle / 4- bottom / 3-upper**)

6_ P- block contains Groups

(**10 / 2 / 6 / 8**)

7_ The chemical properties of (Ca_{20}) Are similar to those of

($_{19}\text{K}$ / $_{3}\text{Li}$ / $_{12}\text{Mg}$ / $_{25}\text{Mn}$)

8_ The scientist Mosely arranged the elements ascendingly according to their

(**atomic weight / atomic number**)

9_ All the following elements are located in the same group , except

(**$_{19}\text{K}$ / $_{11}\text{Na}$ / $_{12}\text{Mg}$ / $_{3}\text{Li}$**)

10_ the inert gas that exists in period three has atomic number equals

(**3 / 10 / 7 / 18**)

11_ the measuring unit of atomic radius is

(**Picometer / Dobson / gm / cm³**)

12_ Is from Nobel gases

(**Cesium / sodium / Neon / potassium**)

13_ transition elements start to appear in period number

(**2 / 4 / 3 / 6**)

14_ the element whose atomic number equals 18 is considered Element

(**Inert gas / metallic / transition**)

15_ the atomic number of element which lies in period 3 and group 7A is

(**15 / 17 / 10 / 7**)

16_ the atomic number of element which lies in period 2 and group 7A is

(**17 / 9 / 12 / 7**)

17_ nucleus is positively charged because it contains

(**Electrons / neutrons / protons / energy levels**)

18_ helium locates ingroup

(**2A / 3A / 4A / zero**)

19_explained his periodic table in his book principles of chemistry

(**Bohr / Mendeleev / Moseley / Rutherford**)

20_ Mendeleev arranged elements of similar properties in vertical column called later as

(**Groups / periods / rows / lines**)

21_ the transition element are found in

(**S-block / d-block / f-block / p-block**)

22_ the scientist who was discovered the main energy levels

(**Bohr / Mosely / Mendeleev / Rutherford**)

23_ the correct order to arrange B_5 , Ca_{20} , Mg_{12} , and Al_{13} , descendingly according to the atomic size

(**Ca > Al > B > mg / Ca > Al > mg > B / Ca > Mg > Al > B / B > Al > Mg > Ca**)

24_ each period in the modern periodic table starts withand ends with

(**Metal - nonmetal / Metal - Metalloid / Metal-Metal / Metal - Nobel gas**)

25_ the strongest nonmetal locates in group

(**7A / 1B / 1A / 2A**)

26_ An element ${}_{17}\text{X}$ is similar toin its chemical properties

(${}_2\text{A}$ / ${}_{19}\text{Z}$ / ${}_9\text{L}$)

27_ The difference in electronegativity between the elements of polar compound is

(**Very high** / **relatively high** / **zero** / **relatively low**)

28_ the strongest nonmetal in the modern periodic table is

(**fluorine** / **Sodium** / **cesium** / **astatine**)

29_ the strongest metal in the modern periodic table is

(**fluorine** / **Sodium** / **cesium** / **astatine**)

30_ Sodium oxide fromOxides

(**Amphoteric** / **Acidic** / **basic** / **nonmetallic**)

31_ when sodium reacts with water , Gas evolved

(**Hydrogen** / **oxygen** / **nitrogen** / **carbon dioxide**)

32_ which of the following react with dilute hydrochloric Acid?

.....

(**C** / **Cl** / **S** / **Zn**)

33_ which of the following doesn't react with dilute hydrochloric Acid?

(**C** / **Na** / **Mg** / **Zn**)

34_ from the examples of amphoteric oxide

(**CO₂** / **Al₂O₃** / **MgO** / **N₂O**)

35_ Metal oxide are called Oxides

(**Acidic** / **basic** / **salty** / **amphoteric**)

36_ Nonmetal oxide are called Oxides

(**Acidic / basic / salty / amphoteric**)

37_ burning carbon in oxygen produces

(**CO / CO₂ / H₂CO₃ / a&c**)

38_ All the following are related to CO₂ , except

(**It is acidic oxide / it is nonmetal oxide / turn litmus to red /
turn litmus into blue**)

39_ All the following are related to MgO , except

(**It is basic oxide / it is metal oxide / turn litmus to red /
turn litmus into blue**)

40_ sodium oxide is from

(**Amphoteric / acidic / basic / nonmetallic**)

41_ react very slowly with cold water

(**Ca&Mg / K& Na / Zn& Fe / Cu&Ag**)

Put (✓) or (X):-

- 1_ the modern periodic table consists of 9 () horizontal periods and 13 vertical groups
- 2_ the transition elements start to appear at the () fourth period of the modern periodic table
- 3_ Mendeleev arranged elements in an () ascending order according to their atomic numbers
- 4_ Mosely classified the elements of each main () group into 2 subgroups A & B
- 5_ the s-block in the modern periodic table () contains 2 groups
- 6_ the modern periodic table consists of 18 () horizontal periods and 7 vertical columns
- 7_ Atomic size decrease in the same group in () the modern periodic table , by increasing the atomic number
- 8_ Atomic size decrease in the same period in () the modern periodic table , by increasing the atomic number
- 9_ the p-block elements are located in the left () side of the periodic table
- 10_ the f-block contain lanthanides and () actinides
- 11_ Na_2O is an Acidic oxide ()

12_ the atomic size of the elements of the () same group in the modern periodic table , increases by the increase of elements atomic numbers.

13_ $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$ ()

14_ both nitrogen (7N) and carbon (6C) are () located in the same group in the modern periodic table

15_ water and ammonia are from polar () compound

16_ An element has atomic number equals 3 , () so the atomic number of the element that follow it in the same group equals " 18 "

17_ the nonmetallic property increase () gradually as we go from top to the bottom in the same period , in the modern periodic table

18_ Acidic oxides turn litmus paper into blue ()

19_ solutions of metal oxides turn blue litmus () paper into blue

20_ the modern periodic table consist of 17 () horizontal periods and 8 vertical groups

21_ Bohr discovered the seven main energy () levels in the known heaviest atom

22_ each period in the modern periodic table () starts with inert gas

Correct:-

- 1_ elements of the "**s- block**" includes 6 groups in the modern periodic table.
- 2_ the element (12 X) is located in "**period 2 and group (3A)**" in the modern periodic table.
- 3_ the modern periodic table contains "**100**" element.
- 4_ the transition elements start to appear at period number "**3**".
- 5_ "**Mendeleev**" discover the positive proton
- 6_ the measuring unit of atomic size is "**cm**".
- 7_ the number of Known elements in the modern periodic table till now is "**92**".
- 8_ the number of energy levels in the heaviest known atom is "**9**" levels
- 9_ the elements are arranged in "**Mendeleev's periodic table**" according to atomic numbers and the way of filling energy sublevels with electrons.
- 10_ "**Moseley**" discovered that the nucleus of the atom contains positively charged protons.
- 11_ the element which has an atomic number equal 18 is "**a metallic metal**"
- 12_ An element that is located in period (3) and group 2A has atomic number equal "**19**"
- 13_ Magnesium oxide is an "**Acidic oxide**"

14_ Basic oxide dissolve in water forming "Acids"

15_ Magnesium reacts with dilute HCL and "CL₂" gas is evolves

16_ the number of energy levels occupied by electron in the atom of an element indicates its "group" number

17_ Both of "K and Mg" don't react with water.

18_ MgO is an "acidic" oxide.

19_ Each period starts with a "weak metal"

20_ each period in the modern periodic table ends with a "nonmetal"

21_ "Calcium and magnesium" react with hot water vapor only.

22_ some "salts" dissolve in water forming alkalis

23_ the element which is located in period 3 and group 3A is "5B"

24_ "copper" reacts instantly with water and hydrogen gas evolved.

25_ "inert gases" have properties of metals and nonmetals.

26_ "lithium" is the strongest metallic element in group 1A.

27_ the metallic property "**decrease**" in group 1A as we go from the top to the bottom

28_ the number of electrons in positive ion is "**greater than**" that of its atom

29_ Transition elements lie in "**s-block**"

30_ both nitrogen (7N) and carbon (6C) are located in the same "**group**" in the modern periodic table

31_ An element has atomic number equals 7 , so the atomic number of the element that follow it in the same group equals "**18**"

32_ basic oxides turn litmus paper into "**red**"

Write the scientific term :-

- 1_ Elements of zero group in the modern periodic table.
- 2_ The block that contains the series of lanthanides and actinides.
- 3_ The ascending order of the element according to their atomic weights.
- 4_ The block that contains the groups from 3A to Zero.
- 5_ The block that contains the groups from 3B to 2B.
- 6_ The block that starts from the group 3B.
- 7_ The block that contains the groups from 1A and 2A.
- 8_ Block of elements that are arranged into two horizontal series at the lower part of the modern periodic table.
- 9_ The block which contains lanthanides and actinides.
- 10_ The number of positive protons inside the nucleus of the atom of an element.
- 11_ It indicates the number of electrons that revolve in energy level.
- 12_ Elements that start to appear from period number four in the modern periodic table.

13_ The measuring unit of the atomic radius which is used as a measure for the atomic size.

14_ The ability of the atom to attract the bond electrons to itself in the covalent compound.

15_ They are elements that have the properties of both metals and nonmetals.

16_ It is the table in which the elements are arranged in an ascending order according to their atomic weights.

17_ They are covalent compounds in which the difference in electronegativity between their elements is relatively high.

18_ The polar compound that consists of one oxygen atom and two hydrogen atoms.

19_ The polar compound that consists of one Nitrogen atom and three hydrogen atoms.

20_ elements that have the properties of of metals and non-metals.

21_ the descending arrangement of metals according to their chemical activity.

22_ the scientist who discovered the main energy levels.

Give example for :-

- 1_ A polar compound
- 2_ Metal doesn't react with water
- 3_ Metal reacts with hot water vapor at high temperatures only
- 4_ Metal reacts instantly with water and hydrogen gas evolves
- 5_ Metal react very slowly with cold water
- 6_ A basic oxide
- 7_ Acidic oxide
- 8_ element has zero electronegativity
- 9_ Amphoteric oxide
- 10_ A metalloid / semi metallic element
- 11_ nonmetallic element
- 12_ Metallic element

Mention The name of the scientist who :-

1_ Discovered that the nucleus of an atom contains positively charged protons

2_ Discovered the main energy levels in the atom

3_ Discovered that the periodicity of element properties is related to their atomic number not to their atomic weight

4_ Added zero group to the periodic table

5_ corrected the atomic weight of some elements which were estimated wrongly

Mention the atomic number of each of the following :

1_ the element , which is located in the second period and in group 7A

2_ the element , which is located in the third period and in group 1A

3_ the element , which is located in the first period and in group 18

4_ element exist in period 2 and group 6A

5_ element exist in period 3 and group 2A

6_ element exist in period 2 and group 0

Answer Sheet**Complete:-**

- 1-(7periods _ 18 groups)
- 2-(Their Atomic weights _ atomic numbers)
- 3-(Bohr)
- 4-(S / D)
- 5-(P - F)
- 6-(18 _ 15)
- 7-(Group)
- 8-(transition)
- 9-(4 - 10 groups)
- 10-(7 period - 18 groups)
- 11-(Fourth - ten)
- 12-(Atomic number)
- 13-(Atomic numbers _ energy sublevels)
- 14-(67)
- 15-16 - 18
- 16-(Lanthanides and actinides)
- 17-(Water and ammonia)

- 18-(Lose - preceding)
- 19-(Lanthanides and actinides)
- 20-(Alkaline solution - blue)
- 21-(Hydrogen - burn with pop)
- 22-(H_2CO_3)
- 23-(H_2SO_4 - $\text{H}_2 \uparrow$)
- 24-(Zinc - iron)
- 25-(Magnesium hydroxide - carbonic acid)
- 26-(Metals - non metals)
- 27-(Silicon)
- 28-(7 A)
- 29-($\text{Mg} + 2\text{HCL}$)
- 30-($\text{CO}_2 + \text{H}_2\text{O}$)
- 31-(Zinc - copper)
- 32-(AL_2O_3)
- 33-(Kerosene - moist air)

Choose:-

1_ Is the scientist who arranged the elements in ascending order according to their atomic number

(Rutherford / "by Moseley" / Mendeleev / Bohr)

2_ Is the scientist who arranged the elements in ascending order according to their atomic weight

(Rutherford / Moseley / "Mendeleev" / Bohr)

3_ the scientist who left gaps in his table to be filled with suitable discovered elements in the future is

(Rutherford / Moseley / "Mendeleev" / Bohr)

4_ the scientist discovered that the nucleus of an atom contains positive protons

("Rutherford" / Moseley / Mendeleev / Bohr)

5_ the transition elements starting to appear from periodand they lie at theof the periodic table

(3-upper / "4-middle" / 4- bottom / 3-upper)

6_ P- block contains Groups

(10 / 2 / "6" / 8)

7_ the chemical properties of (Ca_{20}) Are similar to those of

($_{19}\text{K}$ / $_{3}\text{Li}$ / " $_{12}\text{Mg}$ " / $_{25}\text{Mn}$)

8_ the scientist Mosely arranged the elements ascendingly according to their

(atomic weight / "atomic number")

9_ All the following elements are located in the same group , except

($_{19}\text{K}$ / $_{11}\text{Na}$ / " $_{12}\text{Mg}$ " / $_3\text{Li}$)

10_ the inert gas that exists in period three has atomic number equals

(3 / 10 / 7 / "18")

11_ the measuring unit of atomic radius is

("Picometer" / Dobson / gm / cm^3)

12_ Is from Nobel gases

(Cesium / sodium / "Neon" / potassium)

13_ transition elements start to appear in period number

(2 / "4" / 3 / 6)

14_ the element whose atomic number equals 18 is considered Element

("Inert gas" / metallic / transition)

15_ the atomic number of element which lies in period 3 and group 7A is

(15 / "17" / 10 / 7)

16_ the atomic number of element which lies in period 2 and group 7A is

(17 / "9" / 12 / 7)

17_ nucleus is positively charged because it contains

(Electrons / neutrons / "protons" / energy levels)

18_ helium locates ingroup

(2A / 3A / 4A / "zero")

19_explained his periodic table in his book principles of chemistry

(Bohr / "Mendeleev" / Moseley / Rutherford)

20_ Mendeleev arranged elements of similar properties in vertical column called later as

("Groups" / periods / rows / lines)

21_ the transition element are found in

(S-block / "d-block" / f-block / p-block)

22_ the scientist who was discovered the main energy levels

("Bohr" / Mosely / Mendeleev / Rutherford)

23_ the correct order to arrange B_5 , Ca_{20} , Mg_{12} , and Al_{13} , descendingly according to the atomic size

($Ca > Al > B > mg$ / $Ca > Al > mg > B$ / " $Ca > Mg > Al > B$ " / $B > Al > Mg > Ca$)

24_ each period in the modern periodic table starts withand ends with

(Metal - nonmetal / Metal - Metalloid / Metal-Metal / "Metal - Nobel gas")

25_ the strongest nonmetal locates in group

("7A" / 1B / 1A / 2A)

26_ An element 17X is similar toin its chemical properties

(${}_2\text{A}$ / ${}_{19}\text{Z}$ / " ${}_9\text{L}$ ")

27_ The difference in electronegativity between the elements of polar compound is

(Very high / "relatively high" / zero / relatively low)

28_ the strongest nonmetal in the modern periodic table is

("fluorine" / Sodium / cesium / astatine)

29_ the strongest metal in the modern periodic table is

(fluorine / Sodium / "cesium" / astatine)

30_ Sodium oxide fromOxides

(Amphoteric / Acidic / "basic" / nonmetallic)

31_ when sodium reacts with water , Gas evolved

("Hydrogen" / oxygen / nitrogen / carbon dioxide)

32_ which of the following react with dilute hydrochloric Acid?

.....

(C / Cl / S / "Zn")

33_ which of the following doesn't react with dilute hydrochloric Acid?

("C" / Na / Mg / Zn)

34_ from the examples of amphoteric oxide

(CO_2 / " Al_2O_3 " / MgO / N_2O)

35_ Metal oxide are called Oxides

(Acidic / "basic" / salty / amphoteric)

36_ Nonmetal oxide are called Oxides

(" Acidic " / basic / salty / amphoteric)

37_ burning carbon in oxygen produces

(CO / " CO₂ " / H₂CO₃ / a&c)

38_ All the following are related to CO₂ , except

(It is acidic oxide / it is nonmetal oxide / turn litmus to red / " turn litmus into blue")

39_ All the following are related to MgO , except

(It is basic oxide / it is metal oxide / " turn litmus to red" / turn litmus into blue)

40_ sodium oxide is from

(Amphoteric / acidic / " basic " / nonmetallic)

41_ react very slowly with cold water

(" Ca&Mg " / K& Na / Zn& Fe / Cu&Ag)

Put (✓) or (X):-

1_ the modern periodic table consists of 9 horizontal periods and 13 vertical groups	(X)
2_ the transition elements start to appear at the fourth period of the modern periodic table	(✓)
3_ Mendeleev arranged elements in an ascending order according to their atomic numbers	(X)
4_ Mosely classified the elements of each main group into 2 subgroups A & B	(X)
5_ the s-block in the modern periodic table contains 2 groups	(✓)
6_ the modern periodic table consists of 18 horizontal periods and 7 vertical columns	(X)
7_ Atomic size decrease in the same group in the modern periodic table , by increasing the atomic number	(X)
8_ Atomic size decrease in the same period in the modern periodic table , by increasing the atomic number	(✓)
9_ the p-block elements are located in the left side of the periodic table	(X)
10_ the f-block contain lanthanides and actinides	(✓)
11_ Na ₂ O is an Acidic oxide	(X)
12_ the atomic size of the elements of the same	(✓)

group in the modern periodic table , increases by the increase of elements atomic numbers.	
13_ $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$	(✓)
14_ both nitrogen (7N) and carbon (6C) are located in the same group in the modern periodic table	(X)
15_ water and ammonia are from polar compound	(✓)
16_ An element has atomic number equals 3 , so the atomic number of the element that follow it in the same group equals " 18 "	(X)
17_ the nonmetallic property increase gradually as we go from top to the bottom in the same period , in the modern periodic table	(X)
18_ Acidic oxides turn litmus paper into blue	(X)
19_ solutions of metal oxides turn blue litmus paper into blue	(✓)
20_ the modern periodic table consist of 17 horizontal periods and 8 vertical groups	(X)
21_ Bohr discovered the seven main energy levels in the known heaviest atom	(✓)
22_ each period in the modern periodic table starts with inert gas	(X)

Correct:-

1_ elements of the " <u>s- block</u> " includes 6 groups in the modern periodic table	(p - block)
2_ the element (12 X) is located in " <u>period 2 and group (3A)</u> " in the modern periodic table	(Period 3 and group 2 A)
3_ the modern periodic table contains " <u>100</u> " element	(118)
4_ the transition elements start to appear at period number " <u>3</u> "	(4)
5_ " <u>Mendeleev</u> " discover the positive proton	(Rutherford)
6_ the measuring unit of atomic size is " <u>cm</u> "	(Picometer)
7_ the number of Known elements in the modern periodic table till now is " <u>92</u> "	(118)
8_ the number of energy levels in the heaviest known atom is " <u>9</u> " levels	(7)
9_ the elements are arranged in " <u>Mendeleev's periodic table</u> " according to atomic numbers and the way of filling energy sublevels with electrons.	(Modern periodic table)

10_ " <u>Moseley</u> " discovered that the nucleus of the atom contains positively charged protons.	(Rutherford)
11_ the element which has an atomic number equal 18 is " <u>a metallic metal</u> "	(Noble gas)
12_ An element that is located in period (3) and group 2A has atomic number equal " <u>19</u> "	(12)
13_ Magnesium oxide is an " <u>Acidic oxide</u> "	(Basic oxide)
14_ Basic oxide dissolve in water forming " <u>Acids</u> "	(Alkalis)
15_ Magnesium reacts with dilute HCL and " <u>CL₂</u> " gas is evolves	(H ₂)
16_ the number of energy levels occupied by electron in the atom of an element indicates its " <u>group</u> " number	(period)
17_ Both of " <u>K and Mg</u> " don't react with water.	(Cu and Ag)
18_ MgO is an " <u>acidic</u> " oxide.	(Basic)
19_ Each period starts with a " <u>weak metal</u> "	(strong metal)

20_ each period in the modern periodic table ends with a " <u>nonmetal</u> "	(Inert gas)
21_ " <u>Calcium and magnesium</u> " react with hot water vapor only.	(Zinc and iron)
22_ some " <u>salts</u> " dissolve in water forming alkalis	(Metals)
23_ the element which is located in period 3 and group 3A is " <u>5B</u> "	(13Al)
24_ " <u>copper</u> " reacts instantly with water and hydrogen gas evolved.	(Potassium)
25_ " <u>inert gases</u> " have properties of metals and nonmetals.	(metalloids)
26_ " <u>lithium</u> " is the strongest metallic element in group 1A.	(cesium)
27_ the metallic property " <u>decrease</u> " in group 1A as we go from the top to the bottom	(increase)
28_ the number of electrons in positive ion is " <u>greater than</u> " that of its atom	(less)
29_ Transition elements lie in " <u>s-block</u> "	(d-block)
30_ both nitrogen (7N) and carbon (6C) are located in the same " <u>group</u> " in the modern periodic table	(period)

31_ An element has atomic number equals 7 , so the atomic number of the element that follow it in the same group equals " 18 "

(15)

32_ basic oxides turn litmus paper into " red "

(Blue)

Write the scientific term :

1_ elements of zero group in the modern periodic table
(**inert gases**)

2_ the block that contains the series of lanthanides and actinides

(**F -block**)

3_ the ascending order of the element according to their atomic weights

(**mendeleev's periodic table**)

4_ the block that contains the groups from 3A to Zero

(**P- block**)

5_ the block that contains the groups from 3B to 2B

(**d - block**)

6_ the block that start from the group 3B

(**d - block**)

7_ the block that contains the groups from 1A and 2A

(**S - block**)

8_ Block of elements that arranged into two horizontal series at the lower part of the modern periodic table

(**F- block**)

9_ the block which contains lanthanides and actinides

(**F-block**)

10_ the number of positive protons inside the nucleus of the atom of an element

(**atomic number**)

11_ it indicates the number of electrons that revolve in energy level

(**the atomic number**)

12_ elements that starting to appear from period number four in the modern periodic table

(**transition elements**)

13_ the measuring unit of the atomic radius which is used as a measure for the atomic size

(**picometre**)

14_ the ability of the atom to attract the bond electrons to itself in the covalent compound

(**electronegativity**)

15_ they are elements that have the properties of both metals and nonmetals

(**Metalloids**)

16_ it is the table in which the elements are arranged in an ascending order according to their atomic weights

(**Mendeleev's periodic table**)

17_ they are covalent compounds in which the difference in electronegativity between their elements is relatively high

(**polar compounds**)

18_ the polar compound that consists of one oxygen atom and two hydrogen atoms

(**water compound**)

19_ the polar compound that consists of one Nitrogen atom and three hydrogen atoms

(**Ammonia compound**)

20_ elements that have the properties of metals and non metals

(**Metalloids**)

21_ the descending arrangement of metals according to their chemical activity

(**chemical activity series**)

22_ the scientist who discovered the main energy levels

(**Bohr**)

Give example for :

1_ A polar compound

(**Water / Ammonia**)

2_ Metal doesn't react with water

(**Silver / copper**)

3_ Metal reacts with hot water vapor at high temperatures only

(**zinc / iron**)

4 _ Metal reacts instantly with water and hydrogen gas evolves

(**potassium / sodium**)

5_ Metal react very slowly with cold water

(**calcium / magnesium**)

6_ A basic oxide

(**Na₂O / MgO**)

7_ Acidic oxide

(**CO₂ / SO₂**)

8_ element has zero electronegativity

(**helium / Neon/ Argon/ krypton / xenon / radon**)

9_ Amphoteric oxide

(**Aluminum oxide -Al₂O₃**)

10_ A metalloid / semi metallic element

(**BORON / SILICON / ARSENIC / GERMANIUM / TELLURIUM / Antimony**).

11_ nonmetallic element

(**Carbon**)

12_ Metallic element

(**Sodium**)

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Mention The name of the scientist who :

1_ Discovered that the nucleus of an atom contains positively charged protons

(**Rutherford**)

2_ Discovered the main energy levels in the atom

(**Bohr**)

3_ Discovered that the periodicity of element properties is related to their atomic number not to their atomic weight

(**Moseley**)

4_ Added zero group to the periodic table

(**Moseley**)

5_ corrected the atomic weight of some elements which were estimated wrongly

(**Mendeleev**)

Mention the atomic number of each of the following :

1_ the element , which is located in the second period and in group 7A

(9)

2_ the element , which is located in the third period and in group 1A

(11)

3_ the element , which is located in the first period and in group 18

(2)

4_ element exist in period 2 and group 6A

(8)

5 _ element exist in period 3 and group 2A

(12)

6_ element exist in period 2 and group 0

(10)

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الاول



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1 Choose the correct answer:

Attempts of Elements of Classification

1. The number of elements in Earth's crust equals
a 92 **b** 118 **c** 120 **d** 123
2. The scientist added group zero in his table for noble gases.
a Mendeleev **b** Mosely **c** Bohr **d** Rutherford
3. The scientist had discovered the main energy levels.
a Mendeleev **b** Mosely **c** Bohr **d** Hoffman
4. The main energy levels discovered by Bohr in the atom are
a 3 **b** 5 **c** 7 **d** 9
5. The modern periodic table contains elements.
a 26 **b** 92 **c** 100 **d** 118
6. P-block contains groups.
a 2 **b** 6 **c** 8 **d** 10
7. The atomic number of an element equals
a the sum of neutron number inside the nucleus.
b the sum of the number of electrons which rotate in the energy levels.
c the number of protons inside the nucleus.
d Both (b) and (c) are correct.
8. The atomic number of an element that exists in group (7A) and period (2) is
a 12 **b** 7 **c** 9 **d** 17
9. Which of the following elements is located in the third period?
a K_{19} **b** C_6 **c** P_{15} **d** Li_3
10. Elements in the same period in the modern periodic table have the same
a atomic number **b** number of energy levels
c number of electrons in their outermost energy level
d valency
11. The element, whose atomic number is 15 has similar chemical properties as the element whose atomic number is
a 17 **b** 19 **c** 5 **d** 7
12. The inert gas that has the same electronic structure as Na^+ is
a Ne_{10} **b** He_2 **c** Ar_{18} **d** Cl_{17}
13. The transition elements start to appear from the beginning of the period.
a first **b** second **c** third **d** fourth

Graduation of Properties of Elements in the Modern Periodic Table

14. is the lowest metallic element in group (1A).
 a Na b Cs c K d Li
15. The oxide which dissolved in water and produces an acid is
 a CO₂ b CuO c MgO d FeO
16. Metal oxides are oxides.
 a acidic b basic c both of them d no correct answer
17. Which of the following is an acidic oxide?
 a CO₂ b MgO c Na₂O d FeO
18. Each period in the modern periodic table starts with a/an
 a metal b nonmetal c metalloid d inert gas
19. react with water instantly and hydrogen gas evolves.
 a K and Na b Zn and Fe c Ca and Mg d Cu and Ag
20. Which of the following elements doesn't react with water?
 a K and Na b Zn and Fe c Ca and Mg d Cu and Ag
21. The atomic radius is measured in
 a nanometer b picometer c centimeter d millimeter

Main Groups in the Modern Periodic Table

22. The gas which evolves on reacting alkali metals with water is
 a nitrogen b hydrogen c helium d oxygen
23. When sodium reacts with water gas evolves.
 a nitrogen b hydrogen c helium d oxygen
24. Elements of group (7A) are known as
 a alkali metals b alkaline Earth metals c halogens d inert gases
25. is considered from halogens.
 a Sodium b Chlorine c Helium d Calcium
26. Which of the following is a radioactive element which is used in food preservation?
 a Liquid sodium. b Liquefied nitrogen. c Cobalt 60. d Water.
27. Which of the following is the halogen that exists in a solid state?
 a Fluorine b Chlorine c Bromine d Iodine

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Water

28. There are bonds between water molecules.
a ionic **b** covalent **c** hydrogen **d** metallic
29. The volume of hydrogen gas evolving from water electrolysis is the volume of oxygen gas.
a equal to **b** double **c** half **d** 4 times
30. The density of ice is the density of water.
a equal to **b** greater than **c** less than
31. is a polar compound.
a Petrol **b** Alcohol **c** Water **d** Methane
32. Ice crystals have shape.
a triangular **b** tetragonal **c** pentagonal **d** hexagonal
33. Bilharzia is from the harms resulted from water pollution.
a thermal **b** biological **c** radiant **d** chemical
34. Eating fish, which contain high concentration of causes the death of brain cells.
a mercury **b** arsenic **c** lead **d** iron
35. Water has high boiling point due to the presence of bonds between its molecules.
a hydrogen **b** ionic **c** covalent **d** metallic
36. When putting a glass bottle completely filled with water in the freezer, it breaks because when water freezes, its increases.
a temperature **b** density **c** acidity **d** volume
37. What is the volume of hydrogen gas evolved gas from electrolysis of acidified water if you know that the volume of oxygen gas evolved is 2 cm^3 ?
a 1 cm^3 **b** 2 cm^3 **c** 4 cm^3 **d** 6 cm^3
38. All of the following are from the properties of water except
a It is neutral on both litmus paper. **b** Analysis by heat.
c It increases in volume by heating **d** It is a polar compound.

The Atmospheric Layers

39. Meteors burn in layer.
a thermosphere **b** stratosphere **c** ionosphere **d** mesosphere

40. The coldest layer of the atmosphere is
a thermosphere **b** stratosphere **c** ionosphere **d** mesosphere
41. The normal atmospheric pressure at the sea level equals millibar.
a 1013.25 **b** 101.325 **c** 10.1325 **d** 1.013
42. The first layer of the atmosphere above sea level is
a thermosphere **b** stratosphere **c** troposphere **d** mesosphere
43. Satellite orbit in the layer.
a thermosphere **b** stratosphere **c** exosphere **d** mesosphere
44. is located between stratosphere and mesosphere.
a Tropopause **b** Stratopause **c** Mesopause **d** Thermopause
45. The atmospheric envelope is inserted into outer space in a region called
a exosphere **b** stratopause **c** ionosphere **d** mesopause
46. Ionosphere layer is surrounded by two belts.
a electric **b** magnetic **c** ionic **d** elastic
47. The air in the troposphere layer moves
a horizontally **b** vertically **c** diagonally
48. The second layer of the atmosphere above sea level is
a thermosphere **b** stratosphere **c** troposphere **d** mesosphere
49. The device that is used for determining the elevation from sea level is
a aneroid **b** altimeter **c** speedometer **d** thermometer
50. The atmospheric pressure on the top of a mountain is the atmospheric pressure at the sea level.
a equal to **b** greater than **c** less than

Ozone Erosion and Global Warming

51. One Dobson is defined as
a 0.01 mm **b** 0.1 mm **c** 3 mm **d** 300 mm
52. All of the following are greenhouse gases except
a CO₂ **b** O₂ **c** N₂O **d** CH₄
53. The degree of ozone layer is measured by a unit called
a nanometer **b** nm **c** Dobson **d** km
54. Ozone layer is found in layer.
a thermosphere **b** stratosphere **c** ionosphere **d** mesosphere

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55. is/are used to preserve agricultural crops.

- a** Methyl bromide gas
- b** Nitrogen oxide
- c** Halons
- d** Chlorofluorocarbon compounds

56. All of the following are ozone pollutants except

- a** CO₂
- b** methyl bromide gas
- c** halons
- d** CFC_s

57. is/are used in extinguishing fires.

- a** Halons
- b** methyl bromide gas
- c** halons
- d** CFC_s

Fossils

58. Fossils are preserved (often found) in rocks.

- a** igneous
- b** sedimentary
- c** metamorphic
- d** volcanic

59. Which of the following fossils indicates that the environment where they lived was clear, warm, and shallow seas?

- a** Nummulites fossils.
- b** Ferns fossils.
- c** Coral fossils.
- d** Ammonites fossils.

60. Complete body fossils of insects are found preserved in

- a** snow
- b** amber
- c** oil
- d** soil

61. Mammoth fossils are found preserved in

- a** snow
- b** amber
- c** oil
- d** soil

62. Which of the following fossils indicates that the environment where they lived was a hot and rainy tropical environment?

- a** Nummulites fossils.
- b** Ferns fossils.
- c** Coral fossils.
- d** Ammonites fossils.

63. Which of the following fossils play an important role in petroleum exploration?

- a** Nummulites and ammonites.
- b** Foraminifera and trilobite.
- c** Foraminifera and radiolaria.
- d** Coral and ferns.

64. The replaces the wood material, part by part of an old tree.

- a** plastic
- b** copper
- c** iron
- d** silica

65. is an example of microfossils.

- a** Fern
- b** Coral
- c** Nummulites
- d** Foraminifera

66. From the complete body fossils is fossils.

- a** nummulites
- b** ammonites
- c** mammoth
- d** fish

Extinction

67. protectorate is the first protectorate to be established in Egypt.

- a** Ras Mohamed
- b** Wadi Hetan
- c** Petrified forests
- d** Panda

68. From the endangered species is the
 a dinosaur b bald eagle c dodo bird d quagga
69. is one of the most important causes of extinction in the recent ages.
 a Volcanic eruption. b Falling of meteorites.
 c Over-hunting and environmental pollution. d Falling of icebergs.
70. protectorate is a natural protectorate in USA where grey bear is protected.
 a Ras Mohamed b Wadi Hetan c Bluestone d Panda
71. All of the following are from endangered species except
 a bald eagle b quagga c papyrus plant d rhinoceros
72. From the extinct species is
 a bald eagle b dodo bird c papyrus plant d rhinoceros

2 Complete each of the following sentences:

1. Most of weather phenomena happen in layer.
2. Transition elements appear from period number in the modern periodic table.
4. The ozone layer doesn't allow the penetration of all ultraviolet rays.
5. is an example of polar compounds.
7. Fluorine and chlorine exist in state.
8. is from the negative effects of global warming phenomenon.
9. Atomic size is measured by, while atmospheric pressure is measured by
10. Ultraviolet radiation has a effect while infrared radiation has a effect.
11. Eating fish which contain high concentration of lead causes but drinking water which contains high concentration of mercury leads to
12. The highest-temperature (hottest) layer of the atmosphere is and the least-temperature (coldest) layer is
13. Basic oxides are oxides and their solutions turn the litmus solution into
14. Alkali metals are good conductors of and
15. The height of atmospheric envelope above sea level is km, while the normal pressure equals millibar.
16. $\text{CO}_2 + \text{H}_2\text{O}$
16. $\text{Br}_2 + 2\text{KI}$ +
18. Moseley arranged elements ascendingly according to, while Mendeleev arranged

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elements ascendingly according to

19. Dodo bird is bird, while bald eagle is bird.

21. There are bonds between water molecules.

22. The modern periodic table consists of horizontal periods and vertical groups.

23. By increasing the atomic number in groups, the atomic size due to the number of

24 and are examples of polar compounds.

25. The valency of alkali metal elements is

26 and are endangered species .

27. Pure water boils at and freezes at

28. From the reason of extinction are and

29. The strongest metallic element is found in group

30. The thickness of the mesosphere layer is about km.

52. The thickness of stratosphere is, while that of mesosphere is

31. and are considered from ozone layer pollutants.

32. The normal atmospheric pressure at sea level equals mb.

34. Elements in group, (1A) are called alkali metals as their elements react with forming solutions.

36. By increasing the atomic number, the metallic property in the groups of the periodic table.

37. Fluorine and chlorine exist in state, while iodine exists in state.

39. Elements that locate in the middle of the periodic table are called

43. The transition elements start to appear from the beginning of the period and symbolized by the letter

44. The bond between hydrogen atom and oxygen atom in water molecule is bond, while bonds among water molecules are bonds.

46. The ultraviolet rays are three kinds which are,, and.

47. Sodium is kept under the surface of so as not to react with

49. Archaeopteryx represents the link between and

50. Elements of s-block are located on the side of the periodic table and they are arranged in groups.

53. Moseley put and series below the periodic table.

54. The valency of alkali metal elements is

55. Fossils are used in exploration and determination the age of
56. Fossils always exist in the
58. "d" block elements are called the elements.
59. and are from greenhouse gases.
60. Cobalt 60 has the ability to kill
61. and are from ozone layer pollutants.
62. The strongest nonmetal lies in group
63. When the atomic number increases in the same period, the metallic property
64. The safe areas established to protect endangered species are called
65. $\text{MgO} + \text{H}_2\text{O}$
66. The satellites rotate around the Earth in layer.
67. is from the examples of polar compounds because the difference in electronegativity between its elements is relatively
71. During the electrolysis of acidified water by Hoffman's voltameter, the gas evolves at the anode, while the gas evolves at the cathode.
72. The number of groups in p-block is in modern periodic table.
73. Sodium reacts with water to produce gas.
76. Most of weather features occur in layer.
77. Both sodium (Na_{11}) and potassium (K_{19}) are located in the same because they have the same number of
78. Radiolaria fossil is an example of, but amber fossil is an example of
79. is an instrument used to determine the possible day weather, while is used for the analysis of water by electricity.
80. Number of elements in Mendeleev's periodic table is
81. The angle between water molecules is

3 Write the scientific term for each of the following:

1. The continuous decrease in the number of a certain species of living organisms, without compensation until they all die out. _____
2. Traces and remains of old living organisms that are preserved in the sedimentary rocks. _____
3. Safe places that are specified to protect the endangered species in their homeland. _____

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4. A charged atmospheric layer that reflects radio waves.
5. The ability of the atom in a covalent molecule to attract electrons of the chemical bond towards itself.
6. Replacing part by part the wood material of the trees by silica to form petrified fossils.
7. The continuous increase in the temperature of the Earth's near-surface air.
8. The region between stratosphere and mesosphere at which the temperature remains constant.
9. The halogen which exists in a liquid state.
10. The death of all members of a certain species of living organisms.
11. A type of ultraviolet radiations that penetrates the ozone layer by a percentage of 100%.
12. A type of ultraviolet radiations that is absorbed (95%) by the ozone layer.
13. A type of ultraviolet radiations that is absorbed completely (100%) by the ozone layer.
14. The weight of an air column of an atmospheric height above a unit area.
15. One of components of the atmosphere that its percentage increased in recent years causing the greenhouse phenomenon.
16. A table in which the elements are arranged according to their atomic numbers and the way of filling the energy sub-levels with electrons.
17. It is a series in which metals are arranged in a descending order according to their chemical activity.
18. Addition of any substance to water which causes continuous gradual change in water properties affecting the health and the life of living creatures.
19. It is the solidified resinous matter which was secreted by pine trees in old geologic ages.
20. Metals are arranged descendingly according to their chemical activity.
21. The apparatus which is used in water electrolysis.
22. A unit used for measuring ozone degree.
23. The death of all members of a species of living organisms.
24. A bond that exists between water molecules.

25. The horizontal rows in the modern periodic table.
26. The radioactive element which is used in food preservation.
27. The decrease in the thickness of ozone layer.
28. The separating region between troposphere and stratosphere.
29. The gas which is collected at the cathode in water electrolysis.
30. The semi-conductor element which is used in electronics industry.
31. A liquid metal acts as a heat conductor in nuclear reactors for generating electricity.
32. The kind of bond which binds oxygen atom with hydrogen atom in water molecule.
33. A phenomenon that occurs due to the increase in the percentage of CO_2 gas.
34. A layer which plays an important role in wireless communications.
35. A phenomenon that appears as brightly colored light curtains seen at both poles of the Earth.
36. The block that contains the series of lanthanides and actinides.
37. The atmospheric layer in which the air moves vertically.
38. The strongest metal in group (1A).
39. Fossils of living organisms lived for a short time in the past in a wide geographical range then became extinct.
40. A unit that measures the degree of ozone.
41. The elements that occupy the middle block (d) in the periodic table.
42. An area where the atmospheric envelope is inserted in outer space.
43. Elements where their valency shell contains more than four electrons.
44. A molecule produced from the union of an oxygen atom and its molecule.
45. A bond that exists between water molecules.
46. A device used to measure the elevations above sea level.
47. The product of dissolving nonmetallic oxides in water.
48. Weak electrostatic attraction that arises between the molecules of the polar compounds.
49. The measuring unit of the atomic size of an element.
50. The number of protons inside the nucleus of an element.
51. The halogen which exist in a solid state.

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52. The scientist who discovered that the atom contains positive protons in the nucleus.
53. Elements which have properties of metals and nonmetals.
54. Two magnetic belts surrounding ionosphere and play an important role in scattering harmful charged cosmic radiations.
55. The apparatus used for water electrolysis.
56. A mammal between horse and zebra that became extinct recently due to over-hunting.

4 Correct the underlined words:

1. The elements of block (P) are organized in 10 groups in periodic table.
2. Rutherford discovered the main energy levels.
3. The elements with the same physical and chemical properties have been put in horizontal periods.
4. Mendeleev arranged the elements according to their atomic number.
5. Elements of p-block are organized in two groups.
6. Each period in the periodic table starts with an inert gas.
7. An element which is located in the 3rd period and group (2A), its atomic number is 8.
8. Transition elements start to appear in the first period.
9. Sodium oxide is from acidic oxides.
10. Copper reacts instantly with water and hydrogen gas evolves.
11. Chlorine element has the smallest atomic size.
12. Sodium is considered as the most active metal in the periodic table.
13. Alkali metals are bad conductors of heat and electricity.
14. Elements of group 1A are known as halogens.
15. Hydrogen is used in preserving eye cornea.
16. Fluorine is the only liquid halogen.
17. Sodium is used in making electronic slides.
18. Cobalt 60 is used in preservation of cornea of eye.
19. Inert gases have the properties of metals and nonmetals.
20. When the temperature of water decreases to less than 0 °C, its density decreases and, so it floats on water surface in the form of ice crystals.

21. Pure water has an **acidic** effect of litmus paper.
22. **Oil** is a covalent compound that dissolved in water.
23. Storing the tap water in plastic bottles cause the increase of infection of **hepatitis**.
24. **Chemical** pollution of water causes many diseases as typhoid and hepatitis.
25. Ice crystals have a **round** shape.
26. Mixing animals and human wastes with water causes **chemical** pollution.
27. Eating food containing high percentage of lead causes **blindness**.
28. **Sodium chloride** is from polar compounds.
29. **Covalent** bond is a weak electrostatic attraction force which arises among water molecules.
30. All weather phenomena like rain, wind and clouds occur in the **ionosphere**.
31. **Aneroid** is an instrument used to determine the elevation of aeroplanes above sea level.
32. The ozone layer is found in **thermosphere** layer.
33. The **thermometer** is an instrument used to measure atmospheric pressure.
34. Radio waves are reflected and transmitted by communication ion centers in **stratosphere**.
35. Meteors burn in **thermosphere** layer.
36. Increasing **O₂** concentration in the atmosphere produces global warming phenomenon.
37. **Millibar** is the unit of measuring the ozone degree.
38. Infrared radiation has a **chemical** effect.
39. Ultraviolet radiation has a **thermal** effect on Earth.
40. Dobson assumed that the natural amount of the ozone equals **100** Dobson units.
41. The ozone hole appears above the **middle east**.
42. **Mammoth** is an example of microfossils.
43. **Wadi El-Hetan** protectorate is the first established natural protectorate in Egypt.
44. Archaeopteryx links between reptiles and **mammals**.
45. Petrified wood is considered as **rocks**.
46. **Snow** is a solidified resinous matter secreted by pine trees.

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47. **Bald eagle** is from the birds that can't fly because of its small wings.
48. **Coral** fossils indicate that the environment where they lived was a hot and rainy tropical environment.
49. If the metal lost one electron or more, it will become a **negative** ion.
50. **The desert environment** is an example of the complex ecosystem.
51. Panda bear is considered from **extinct** species.

5 Given reason for:

1. Elements of the same group have similar properties.
.....
2. Magnesium oxide is a basic oxide.
.....
3. Cesium is the most active metal in group (1A).
.....
4. The atomic size increases in the same group by increasing the atomic number.
.....
5. The atomic size decreases in periods by increasing the atomic number.
.....
6. Bromine cannot replace chlorine in sodium chloride.
.....
7. Chlorine replaces bromine in potassium bromide solution.
.....
8. Sodium is kept under the surface of kerosene.
.....
9. Cobalt 60 is used in food preservation.
.....
10. Reaction of potassium with water is stronger than that of sodium with water.
.....
11. Liquefied nitrogen is used in preservation of the eye cornea.
.....
12. Water has high boiling point.
.....
13. Water density decreases on freezing.
.....

14. Dissolving of sugar in water although it is among covalent compounds.

15. Silicon slides are used in making electronics as computers.

16. Water molecule is from polar compounds.

17. Adding drops of dilute acid to water during its electrolysis.

18. Pure water doesn't affect blue and red litmus papers.

19. The lower part of stratosphere is suitable for flying aeroplanes.

20. Van-Allen belts play an important role in atmosphere.

21. Ozone layer is formed in stratosphere.

22. The ozone layer acts a protective shield for living organisms.

23. The global warming phenomenon has negative effects on Earth.

24. Occurrence of extinction in the recent ages.

25. Dodo bird was an easy target for hunters.

26. Simple ecosystem is affected strongly by the absence of one of its species .

27. Complicated ecosystem is not affected much by the absence of one of its species.

6 What happens if?

1. Adding the purple sunflower solution to a jar that has a piece of burning coal.

2. Putting a magnesium strip in a test tube containing oxygen.

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3. The pollution of water with animals and human wastes.

4. Storing drinking water in plastic bottles.

5. Dissolving magnesium oxide in water followed by drops of litmus solution.

6. Decreasing water temperature to less than 4°C .

7. Putting a magnesium strip in a test tube containing oxygen.

8. There is no ionosphere layer at the end of thermosphere.

9. Passage of electricity in Hoffman's voltmeter containing acidic water.

10. Overuse of Freon.

11. The overuse of methyl bromide as an insecticide.

12. The resinous matter, which was secreted by pine trees falls on an insect.

13. Eating fish contains high concentration of lead.

14. Extinction of a species from a balanced ecosystem.

7 Write the balanced chemical equations expressing the following reactions:

1. Magnesium and dilute hydrochloric acid.

2. Bromine and potassium iodide.

3. Chlorine and potassium iodide.

4. Chlorine and potassium bromide.

5. Formation of ozone gas.

.....

6. Dissolving of magnesium in water.

.....

7. Putting a piece of sodium in water.

.....

8. Dissolving of carbon dioxide in water.

.....

9. The electrolysis of water (Decomposition of acidified water by electricity).

.....

8 Give an example for:

1. Halogen exists in a liquid state.
2. The strongest metallic element.
3. A metalloid element.
4. Amphoteric oxide.
5. Covalent compound cannot dissolve in water.
6. A greenhouse gas.
7. Trace fossil.
8. A mold fossil.
9. A cast fossil.
10. Petrified fossil.
11. Microfossils which is considered a guide for existence of petroleum.
12. Fossil of a complete body.
13. An extinct bird recently.
14. An endangered bird.
15. An endangered mammal.
16. An endangered plant.
17. Fossils are found in El-Mokattam mountain.

9 Important problems:

1. Calculate the height of a mountain that the temperature at its base = 40°C and at its top = 12°C .
-
-
-

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2. If the temperature at a mountain foot is 35°C . Calculate the temperature at its top if its height is 3 km.

.....

.....

.....

3. Look at the opposite figure, then answer:

1- Mention the name of the apparatus.

.....

2- Label the figure.

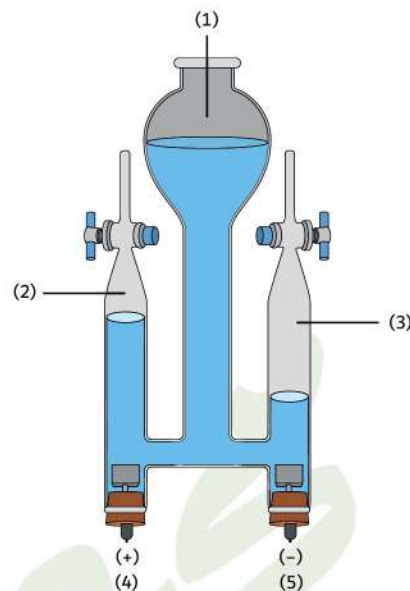
.....

3- Write the symbolic balanced chemical equation.

.....

4- Calculate the volume of the gas that evolves at the positive pole if the volume of the gas at the negative pole is 20 cm^3 .

.....



4. Study the opposite figures and answer the following questions:

1- Which figure represents a positive ion?

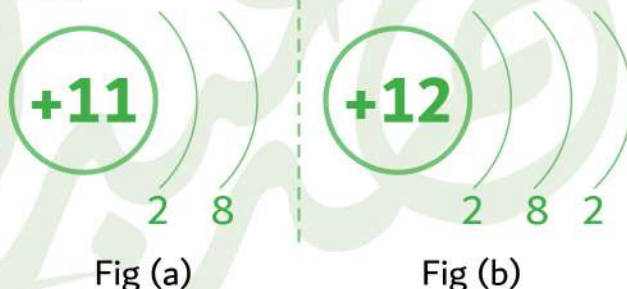
.....

2- Which figure represents a neutral atom?

.....

3- Determine the position of the atom in the periodic table.

.....



5. Using the following diagram which represents a part of the periodic table, answer the following questions:

${}^1_1\text{H}$																${}^2_2\text{He}$
3	X							5	6	Y	8	9	10			
11	12										Z	17	G			
19	M					N						35	${}^{36}_{36}\text{Kr}$			

1- Write the letter(s) of the element(s) which is/are:

- (1) among transition elements.
- (2) located in period (3) and group (6A).
- (3) among noble gases.
- (4) considered among s-block.
- (5) considered among p-block.

2. Choose:

(1) The letter (Y) represents element.

a ${}_9\text{F}$

b ${}_8\text{O}$

c ${}_{12}\text{Mg}$

d ${}_7\text{N}$

(2) The letter (M) represents element.

a ${}_{12}\text{Mg}$

b ${}_{16}\text{S}$

c ${}_{20}\text{Ca}$

d ${}_{18}\text{Ar}$

(3) The letter (N) is located in block.

a s

b p

c d

d f

3. What is the atomic number of the elements (N) and (G)?

10 Locate the position of the following elements in the modern periodic table:

1

${}_{19}\text{K}$

Group

Period

2

${}_2\text{He}$

Group

Period

3

${}_3\text{Li}$

Group

Period

4

${}_{11}\text{Na}$

Group

Period

5

${}_{20}\text{Ca}$

Group

Period

6

${}_{13}\text{Al}$

Group

Period

7

${}_{12}\text{Mg}$

Group

Period

8

${}_{16}\text{S}$

Group

Period

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

الترم الاول



Final revision Prep.2

1-Choose the correct answer :

(1) Each period in the modern periodic table starts with..... element.

(metallic - semi metallic - nonmetallic - inert)

(2) In the same period, the element which has the highest electro negativity lies in group

(0 - 7 A - 2 A - 1 A)

(3) When sodium react with water..... gas evolves. (O_2 - CO_2 - H_2 - N_2)

(4) A liquid boils at $100^\circ C$, what is the other property which affirm it is a pure water

(Sugar dissolves in it / when it freezers , density decreases / neutral on both litmus paper / it evaporates on heating)

(5) Scientistsdiscovered the main energy levels in the atom

(Bohr / Mendeleev / Mosely / Hoffman)

(6) Sodium oxide fromoxides (amphoteric / acidic / nonmetallic / basic)

(7) All the following elements from semimetals except for (tellurium / silicon / boron / bromine)

(8) The strongest metal lies in thegroup. (2A / 1A / 1B / 7A)

9) -Normal atmospheric pressure equals..... millibar.

(1013.25 / 76 / 1.013 / 760)

10)is located between stratosphere and mesosphere.

(Tropopause / Stratopause / Mesopause / Thermopause)

11)- Meteors burn in

(mesosphere / ionosphere / exosphere / stratosphere)

12) Ozone Layer is measured by a unit called

(Km / Dobson / UV / mm³)

13) All are greenhouse gases except

(CO₂ / O₂ / N₂O / CH₄)

(14) is an example of microfossils.

(Mammoth / Ferns / Foraminifera / archaeopteryx)

(15) Complete fossils of insects are found preserved in

(ammonites / amber / igneous rocks / sedimentary rocks)

16)..... indicate(s) extinction.

(Fossils / Protectorates / Evolution / Ecological equilibrium)

17) protectorate is the first established natural protectorate in Egypt.

(Saint Cathrine / Ras Mohamed / Wadi Hetan / Petrified forest)

18)..... form positively charged ions when they enter in the chemical reactions.

(Inert gases - Nonmetal - Halogens - Alkali metals)

19)The elements of group (17) are called

(alkali metals - halogens - inert gases - alkaline Earth metals)

20) Meteors are formed in

(exosphere - thermosphere - mesosphere - stratosphere)

21) is one of the most important causes of the recent extinction age.

(Volcanic eruption - Falling of icebergs - Falling of meteorites -over hunting)

22)The number of known elements is.....

a- 216

b-118

c-316

d-16

23) The number of negative electrons in the atom in its normal state equal

a. number of protons.

b- number of neutrons.

c- twice the number of protons.

d- half the number of neutrons.

24) The atomic number of the elements equals:

- a- The sum of neutron numbers inside the nucleus.**
- b- Sum of the number of electrons which rotate in the energy levels**
- c- The number of protons inside the nucleus.**
- d- b&c are correct.**

25) The density of pure water in solid state is.....

- a- Less than its density in liquid state.**
- b- Equal to its density in vapour state.**
- c- Greater than its density in liquid state.**
- d- Greater than its density in vapour state.**

26) From the most common recently extinct species is.....

- a- Dodo bird.**
- b- Quagga.**
- c- Golden frog.**
- d- All the previous.**

(27) All of the following are from the properties of water except

(neutral on both litmus paper / analysis by heat / increase in volume on heating / polar compound



Write the scientific term for each of the following statements:

- (1) The death of all members of species of living organisms. (.....)
- (2) Extinct bird that has short wings and legs (.....)
- (3) Remains of old organisms that lived in the past for a certain period and then became extinct. (.....)
- (4) Replacing, part by part, the wood material of trees by silica to form petrified wood.(.....)
- (5) The region separates between stratosphere and mesosphere where temperature is constant. (.....)
- (6) Charged layer reflects radio waves. (.....)
- (7) One of the atmosphere components that its ratio increased in recent years to reach about 0.038%. (.....)
- (8) A type of ultraviolet radiation that is absorbed completely (100%) in the Ozone Layer. (.....)
- (9) The region separates between troposphere and stratosphere where temperature is constant. (.....)
- (10) Charged layer has a role in wireless communication (.....)
- (11) One of the atmosphere components that causes global warming phenomenon(.....)
- (12) A type of ultraviolet radiation that not absorbed completely (100%) in the Ozone Layer. (.....)
- (13) The ascending order of the elements according to their atomic mass (.....).
- (14) The ascending order of the elements according to their atomic number (.....).
- (15) The horizontal rows in the Mandeleev's table (.....).
- (16) The vertical columns in the Mandeleev's table (.....).
- (17) Indicated by the letter K, L, M, N, O. (.....)
- (18) Indicated by the letter S, P, d, F (.....)
- (19) A kind of elements symbolized by the letter B (.....).

- 20) The block that contains the groups from 3A to 6A. (.....).
- 21) The block that contains the series of lanthanides and actinides (.....).
- 22) The ability of the atom in the covalent molecule to attract the chemical bond electron to it (.....).
- 23) A kind of oxide reacts as basic oxides or acidic oxides according to the reaction condition . (.....)
- 24) A kind of elements in which their valency electrons contain less than 4 electrons (...)
- 25) A group that contains the strongest non-metals. (.....)
- 26) The block that contains the groups from 3A-7A (.....)
- 27) The region between mesosphere and thermosphere. (.....)
- 28) The 4th layer of the atmospheric envelope. (.....)
- 29) A device used to measure the altitude from the earth's surface.(.....)
- 30) A layer of the atmospheric envelope in which air moves vertically. (.....)
- 31) Two magnetic belts help in dispersing the harmful cosmic radiation away from the earth. (.....)
- 32) The phenomenon looks like a colorful light curtain seen at the two poles.(.....)
- 33) The atmospheric envelope layer that contains a certain amount of helium and hydrogen gas only.(.....)
- 34) The region where the atmospheric envelope merges with the outer space.(.....)
- 35) The phenomenon that increases the percentage (.....)
- 36) A kind of gas formed in the stratosphere. (.....)
- 37) The gas resulting from the reaction of a chlorine atom with ozone gas.(.....)
- 38) A kind of ray that causes the rising of temperature in the troposphere layer. (.....)
- 39) The traces and remains of the old living organisms which are preserved in sedimentary rocks. (.....)

- 40) The traces that indicate the activity of the living organism during their life.(.....)
- 41) The traces that indicate the remains of the old living organism after their death.
(.....)
- 42) The process of conservation of the parts of old living organisms in the solidified materials as a result of replacing the organic material of the organism with minerals. (.....)
- 43) Fossils of living organisms lived for a short period of time and in a wide geographical range. (.....)
- 44) The fossils present in the rocks of different regions and they indicate the evolution and extinction of living organism. (.....)
- 45) The continuous decrease in the number of individuals from the same species of living organisms without compensation with reproduction. (.....)
- 46) Hunting wild animals with a random unorganized way which exposes it to extinction.
(.....)
- 47) The path which energy takes when transporting from one living organism to another one inside the environmental system. (.....)
- 48) The environmental system that is affected severely by the absence of one species of the living organism that live in it. (.....)
- 49) The environmental system that is not affected severely by the absence of one species of the living organism that live in it. (.....)
- 50) Safe places that are specified to protect the endangered species in their natural environment. (.....)

Complete:

(1) Mendeleev arranged the elements ascendingly according to while Moseley arranged them ascendingly according to

(2) The modern periodic table consists of ... horizontal periods,vertical groups.

- (3) The highest temperature layer in the atmosphere isand the least temperature one is
- (4) Most of weather features occur in....layer whereas satellites swim through the.... layer.
- (5) Ultraviolet radiation has a effect, and the infrared radiation has a effect.
- (6) Among the pollutants of the Ozone Layer are compounds that are used in air conditioning sets and.....compounds that are used in fire extinguishers.
- (7) Archaeopteryx represents the link between and
- (8) Fossils are used in exploration and determining the age of
- (9) In Mendeleev's table the elements are arranged..... according to their atomic weight.
- (10) The New Zealand scientist Rutherford discovered that the atom contains Of positive charge.
- (11) The alkali metal elements are..... valent.
- (12) Halogens lie in thegroup.

From the opposite figure , answer the following questions :-

1. What is the name of this apparatus?

.....

2. Label the numbers (1) , (2) , (3) , (4) and (5) .

.....

.....

.....

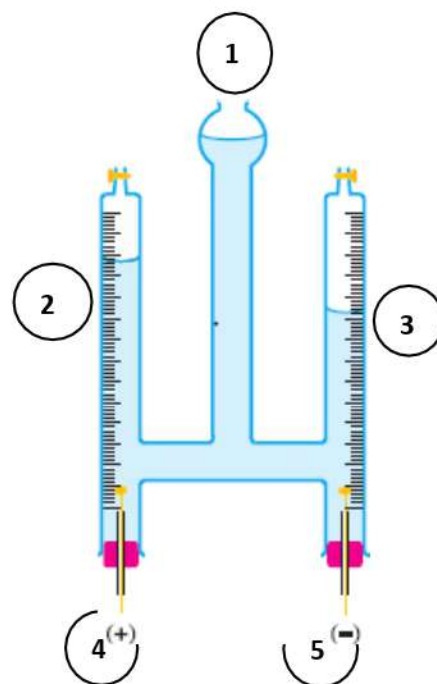
3. What happens if a glowing splint is put above the anode and the cathode?

.....

4. **Calculate** the volume of the gas that evolves at the anode if the volume of the gas that evolves at the cathode is 20 cm^3 .

.....

.....



Unit one model exam

1- Complete:-

1. Mendeleev arranged the elements ascending according to
while Moseley arranged them ascending according to
2. The d- block contains..... element.
3. Sodium is kept under the surface of to
prevent it from the reaction with
4. Hydrogen bond is a weak..... attraction force
between the molecules of..... compounds.
5. By increasing the atomic number the atomic size In the period.

2- Choose the correct answer:

1. The scientist who left gaps in his table to be filled with suitable
discovered elements in the future is
a- Moseley b-Rutherford c-Bohr d-Mendeleev
2. When sodium reacts with water, gas is evolves.
a-N₂ b-O₂ c-H₂ d-CO₂
3. From the positive ions during the chemical reaction.
a-Noble gases b-Non-metals c-Halogens d-Alkali metals
4. is used in liquid state to transfer heat from inside the nuclear reactor to outside
a-Liquid sodium b-Cobalt -60 c- liquefied nitrogen d-Silicon

3- Write the scientific term:

1. Vertical column in Mendeleev's table. (.....)
2. A bond that exists between water molecules. (.....)
3. The block that contains the series of lanthanides and actinides.
(.....)

4- Give reasons for:

1. Bromine can't replace Chlorine in its salt solution.
.....

2. Elements of the same group have the same properties.
.....

3. Solution of carbon dioxide in water turns the violet litmus solution into red.
.....

Unit two model exam

1.Complete the following :

1. and are greenhouse gases.
2. Atmospheric pressure is the of air column on a unit area.
3. Air movement in troposphere is , where hot air currents move, while cold air current move
4. CFC_s compounds commercially known as and they are used in ,

2.Write the scientific term :

1. Charged layers which reflects radio waves. (.....)
2. Two magnetic belt that help in scattering harmful radiation. (...)
3. The increase of CO₂ gas concentration. (... ..)
4. The layer of atmosphere which contains ions. (.....)

3.Correct the under lined words :

1. All UV-C are penetrated by ozone layer.
2. The normal degree of ozone layer 200 DU.
3. UV has thermal effect with short wavelength.
4. Stratosphere is the hottest atmospheric layer.

4.Mention the importance of :

- 1-Aneroid
- 2-Halons
- 3-Ozone layer

Unit three model exam

1. Complete the following :

- 1... trees secret resinous matter, which changes into ... after its solidification.
2. Fossils are used in petroleum.....and determining the age of.....
- 3.....is considered among the safe places that has endangered species.
4. From the extinct animals in the old ages areand.....

2. Write the scientific term:

1. It is the process of replacing wood material of trees by silica ()
2. The death of all members of species of living organisms. (...)
3. Remains of old organisms that lived in the past for certain period, then become extinct.(.....)

3. Exclude the unsuitable word and mention what the rest has in common:

1. Rhinoceros / Panda bear / Quagga / Bald eagle. (.....)
2. Quagga / Dodo bird / Mammoth / **Bald eagle**. (.....)

4. Choose the correct answer:

1. The complete body fossil of mammoth is preserved in
a- amber b- snow c- sedimentary rocks d- sandy rock
2. All of the following are endangered species except
a- panda b- bald eagle c- quagga d- rhinoceros

Answer final revision

Prep.2

1-Choose the correct answer :

(1) Each period in the modern periodic table starts with..... element.

(**metallic** - semimetallic - nonmetallic - inert)

(2) In the same period, the element which has the highest electro negativity lies in group
..... (0 - **7 A** - 2 A - 1 A)

(3) When sodium react with water..... gas evolves. (O₂ - CO₂ - **H₂** - N₂)

(4) A liquid boils at 100 °C, what is the other property which affirm it is a pure water

(Sugar dissolves in it / when it freezers , denstiy decreases / **neutral on both litmus**
paper / it evaporates on heating)

(5) Scientistsdiscovered the main energy levels in the atom

(**Bohr** / Mendeleev / Mosely / Hoffman)

(6) Sodium oxide from oxides (amphoteric / acidic / nonmetallic / **basic**)

(7) All the following elements from semimetals except for

(telerium / silicorm / boron / **bromine**)

(8) The strongest metal lies in thegroup. (2A / **1A** / 1B / 7A)

9) -Normal atmospheric pressure equals millibar.

(**1013.25** / 76 / 1.013 / 760)

10)is located between stratosphere and mesosphere.

(Tropopause / **Stratopause** / Mesopause / Thermopause)

11)- Meteors burn in

(**mesosphere** / ionosphere / exosphere / stratosphere)

12) Ozone Layer is measured by a unit called

(Km / **Dobson** / UV / mm³)

13) All are greenhouse gases except

(CO₂ / **O₂** / N₂O / CH₄)

(14) is an example of microfossils.

(Mammoth / Ferns / **Foraminifera** / archaeopteryx)

(15) Complete fossils of insects are found preserved in

(ammonites / **amber** / igneous rocks / ambergris)

16) indicate(s) extinction.

(**Fossils** / Protectorates / Evolution / Ecological equilibrium)

(17) protectorate is the first established natural protectorate in Egypt.

(Saint Cathrine / **Ras Mohamed** / Wadi Hetan / Petrified forest)

18)..... form positively charged ions when they enter in the chemical reactions.

(Inert gases - Nonmetal - Halogens - **Alkali metals**)

19)The elements of group (17) are called

(alkali metals - **halogens** - inert gases - alkaline Earth metals)

20) Meteors are formed in

(exosphere - thermosphere - **mesosphere** - stratosphere)

21) is one of the most important causes of the recent extinction age.

(Volcanic eruption - Falling of icebergs - Falling of meteorites -

Overhunting and environmental pollution)

22)The number of known elements is.....

a- 216

b-**116**

c-316

d-16

23) The number of negative electrons in the atom in its normal state equals

a- **number of protons.**

b- number of neutrons.

c- twice the number of protons.

d- half the number of neutrons.

24) The atomic number of the elements equals:

- a- The sum of neutron numbers inside the nucleus.
- b- Sum of the number of electrons which rotate in the energy levels
- c- The number of protons inside the nucleus.
- d- **b&c are correct.**

25) The density of pure water in solid state is:

- a- **Less than its density in liquid state.**
- b- Equal to its density in vapour state.
- c- Greater than its density in liquid state.
- d- Greater than its density in vapour state.

26) From the most common recently extinct species is.....

- a- Dodo bird.
- b- Quagga.
- c- Golden frog.
- d- **All the previous.**

(27) All of the following are from the properties of water except

(neutral on both litmus paper / **analysis by heat** / increase in volume on heating / polar compound)

Write the scientific term for each of the following □ statements:

- (1) The death of all members of species of living organisms. (**extinction**)
- (2) Extinct animal has a wolf's head, a dog's tail and a tiger's skin. (**Tasmanian cat**)
- (3) Remains of old organisms that lived in the past for a certain period and then became extinct. **fossils**
- (4) Replacing, part by part, the wood material of trees by silica to form petrified wood. **pertification**
- 5) The boundary separating between stratosphere and mesosphere where temperature is rather constant. (**stratopause**)
- 6) Charged layer reflects radio waves. (**ionosphere**)
- 7) One of the atmosphere components that its ratio increased in recent years to reach about 0.038%. (**CO₂**)

- 8) A type of ultraviolet radiation that is absorbed completely (100%) in the Ozone Layer. (**far uv**)
- 9) The boundary separating between stratosphere and mesosphere where temperature is rather constant. (**tropopause**)
- 10) Charged layer reflects radio waves. **ionosphere**)
- 11) One of the atmosphere components that its ratio increased in recent years to reach about 0.038%. (**CO2**)
- 12) A type of ultraviolet radiation that not absorbed completely (100%) in the Ozone Layer. (**near uv**)
- 13) The ascending order of the elements according to their atomic mass (**Mendeleev's table**).
- 14) The ascending order of the elements according to their atomic number (**Mosley's table**).
- 15) The horizontal rows in the Mandeleev's table (**period**).
- 16) The vertical columns in the Mandeleev's table (**groups**).
- 17) Indicated by the letter K, L, M, N, O. (**main energy levels**).
- 18) Indicated by the letter S, P, d, F (**sub levels**)
- .
- 19) A kind of elements symbolized by the letter B (**transition elements**).
- 20) The block that contains the groups from 3A to 6A. (**P- block**).
- 21) The block that contains the series of luthanides and actinides (**F- block**).
- 22) The ability of the atom in the covalent molecule to attract the chemical bond electron to it.(**electronegativity**)
- 23) A kind of oxide reacts as basic oxides or acidic oxides according to the reaction condition.(**metalloids**)
- 24) A kind of elements in which their valency electrons contain less than 4 electrons. (**metals**)
- 25) A group that contains the strongest non-metals. (**7A – Halogens**)
- 26) The block that contains the groups from 3A-7A (**P-block**)
- 27) The region between mesosphere and thermosphere. (**mesopause**)
- 28) The 4th layer of the atmospheric envelope. (**thermosphere**)
- 29) A device used to measure the altitude from the earths surface.(**Altimeter**)

- 30) A layer of the atmospheric envelope in which air moves vertically. (**troposphere**)
- 31) Two magnetic belts help in dispersing the harmful cosmic radiation away from the earth.(**Van Allen belts**)
- 32) The phenomenon looks like a colorful light curtain seen at the two poles.(**Aurora**)
- 33) The atmospheric envelope layer that contains a certain amount of helium and hydrogen gas only.(**Mesosphere**)
- 34) The region where the atmospheric envelop merges with the outer space.(**exosphere**)
- 35) The phenomenon that increases the percentage of carbon dioxide and leads to an increase in temperature.(**global warming**)
- 36) A kind of gas formed in the stratosphere.(**Ozone gas**)
- 37) The gas resulting from the reaction of a chlorine atom with ozone gas.(**oxygen**)
- 38) A kind of ray that causes the rising of temperature in the troposphere layer. (**infra-red rays**)
- 39) The traces and remains of the old living organisms which are preserved in sedimentary rocks. (**fossils**)
- 40) The traces that indicate the activity of the living organism during their life.(trace)
- 41) The traces that indicate the remains of the old living organism after their death. (**remains**)
- 42) The process of conservation of the parts of old living organisms in the solidified materials as a result of replacing the organic material of the organism with minerals. (**petrification**)
- 43) Fossils of living organisms lived for a short period of time and in a wide geographical range. (**index fossil**)
- 44) The fossils present in the rocks of different regions and they indicate the evolution and extinction of living organism. (**fossils record**)
- 45) The continuous decrease in the number of individuals from the same species of living organisms without compensation with birthing.(**extinction**)
- 46) Hunting wild animals with a random unorganized way which exposes it to extinction.(**over hunting**)
- 47) The path which energy takes when transporting from one living organism to another one inside the environmental system. (**food chain**)
- 48) The environmental system that is affected severely by the absence of one species of the living organism that live in it. (**simple ecosystem**)

- 49) The environmental system that is not affected severely by the absence of one species of the living organism that live in it.(**complicated ecosystem**)
- 50) Safe places that are specified to protect the endangered species in their natural environment.(**natural protectorate**)

Complete:

- (1) Mendeleev arranged the elements ascendingly according to **atomic weight** while Moseley arranged them ascendingly according to **atomic number**
- (2) The modern periodic table consists of **7** horizontal periods , **18**vertical groups.
- (3) The highest temperature layer in the atmosphere is **thermosphere** and the least temperature one is **mesosphere**
- (4) Most of weather features occur in **troposphere**layer whereas satellites swim through the **exosphere** layer.
- (5) Ultraviolet radiation has a **chemical** effect, and the infrared radiation has a **thermal** effect.
- (6) Among the pollutants of the Ozone Layer are **CFC** compounds that are used in air conditioning sets and **halons** compounds that are used in fire extinguishers.
- (7) Archaeopteryx represents the link between **reptiles** and **birds**
- (8) Fossils are used in **petrol** exploration and determining the age of **sedimentary rocks**
- (9) In Mendeleev's table the elements are arranged **ascending order** according to their atomic weight.
- (10) The Newzealand scientist Rutherford discovered that the atom contains **protons** Of positive charge.
- (11)The alkali metal elements are **mono** valent.
- (12)Halogens lie in the elements of **17 (7A)** group.

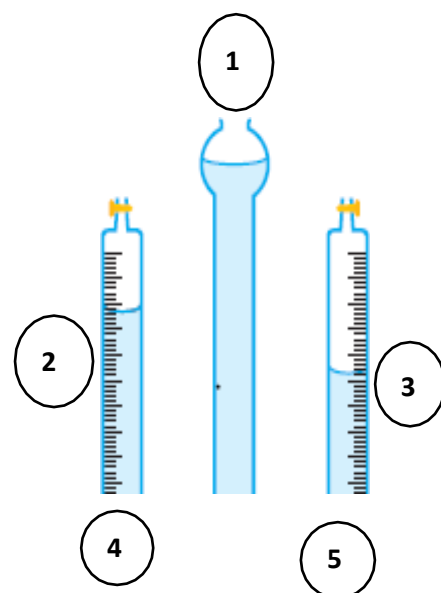
From the opposite figure , answer the following questions :-

1. What is the name of this apparatus?

Hoffman's voltmeter

2. Label the numbers (1) , (2) , (3) , (4) and (5) .

1-Water +drops of dil



H₂SO₄ 2- oxygen gas

3-Hydrogen gas

3. What happens if a glowing splint is put above the anode and the cathode ?

At anode the glowing of splint increases.

At cathode it will burn with a blue flame and pop sound.

4. **Calculate** the volume of the gas that evolves at the anode if the volume of the gas that evolves at the cathode is 20 cm³.

Volume of oxygen = volume of hydrogen / 2

$$= 20/2 = 10 \text{ cm}^3$$

Exam on unit one

1-Complete:-

1. Mendeleev arranged the elements ascending according to atomic weight, while Moseley arranged them ascending according to atomic number.

2. The d- block contains transition element.
3. Sodium is kept under the surface of kerosene to prevent it from the reaction with moist air.
4. Hydrogen bond is a weak electrostatic attraction force between the molecules of polar compounds.
5. By increasing the atomic number the atomic size decreases In the period.

2- Choose the correct answer:

1. The scientist who left gaps in his table to be filled with suitable discovered elements in the future is

a-M oseley b-Rutherford c-Bohr **d-Mendeleev**

2. When sodium reacts with water, gas is evolves.

a-N₂ b-O₂ **c-H₂** d-CO₂

3. From the positive ions during the chemical reaction.

a-Nobel gases b-Non-metals c-Halogens **d-
Alkali metals**

4. is used in liquid state to transfer heat from inside the nuclear reactor to outside

a-Liquid sodium b-Cobalt -60 c- liquefied nitrogen d-Silicon

3- Write the scientific term:

1. Vertical column in Mendeleev's table. (**Groups**)
2. A bond that exists between water molecules. (**Hydrogen bond**)
3. The block that contains the series of lanthanides and actinides.
(**f- block**)

4- Give reasons for:

1. Bromine can't replace Chlorine in its salt solution.

Bec, bromine is less active than chlorine.

2. Elements of the same group have the same properties.

Bec, they have the same number of electrons in the outer most energy level

3. Solution of carbon dioxide in water turns the violet litmus solution into red.

Bec, it is non metal(acidic) oxide

Exam on unit two

1. Complete the following :

1.CO₂.....and ...C.F.C.s..... are greenhouse gases.
2. Atmospheric pressure is the ...weight...of air column on a unit area.
3. Air movement in troposphere is...vertical..... , where hot air currents move ...upward..., while cold air current move ...downward.....
4. CFC_s compounds commercially known as ...Freon and they are used in ...refrigeration, aerosols and foam backing.....

2. Write the scientific term :

1. Charged layers which reflects radio waves. (...Ionosphere.....)
2. Two magnetic belt that help in scattering harmful radiation. (..Van-Allen belts)
3. The increase of CO₂ gas concentration. (...green house effect.....)
4. The layer of atmosphere which contains ions. (.....Ionosphere .)

3. Correct the under lined words :

1. All UV-C are penetrated by ozone layer. Absorbed
2. The normal degree of ozone layer 200 DU. 300
3. UV has thermal effect with short wavelength. Chemical
4. Stratosphere is the hottest atmospheric layer.

Thermosphere 4. Mention the importance of :

- 1- Aneroid Determine the weather conditions
- 2- Halons Used in fire extinguishers
- 3- Ozone layer Protect the Earth from harmful U.V. rays

Exam on unit three

1. Complete the following :

- 1...pine ...trees secrete resinous matter, which changes into
...amber....after its solidification.
- 2.Fossils are used in petroleum ...exploration..... and determining the age of
...sedimentary rocks.....
- 3...Natural protectorate is considered among the safe places that has
endangered species.
- 4.From the extinct animals in the old ages are ...dinosaursand
...mammoth.....

2.Write the scientific term:

- 1.It is the process of replacing wood material of trees by
silica (...Petrification.....)
- 2.The death of all members of species of living
organisms. (...Extinction)
3. Remains of old organisms that lived in the past for certain
period,then become extinct.
(.....index Fossils)

3.Exclude the unsuitable word and mention what the rest has in common:

- 1.Rhinoceros / Panda bear / Quagga / Bald eagle. (endangered species)
- 2.Quagga / Dodo bird / Mammoth / Bald eagle.
(extinct animal)

4.Choose the correct answer:

- 1.The complete body fossil of mammoth is preserved in
a- amber b- snow c- sedimentary rocks d- sandy rock
2. All of the following are endangered species except
a- panda b- bald eagle c-quagga d-rhinoceros

حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

الترم الاول



1) Complete the following:

1. Elements of group (1A) are called, while elements of group (7A) are called
2. Elements that locate in the middle of the periodic table are called and they start to appear from the period number
3. Each period in the modern periodic table starts with and ends with
4. By increasing the atomic number, the value of metallic property in the groups of the periodic table.
5. Fluorine and chlorine exist instate, while iodine exists in state.
6. Mendeleev arranged the elements according to, while Moseley arranged the elements according to
7. From advantages of Mendeleev's table are and
8. The scientist discovered the main energy levels around the nucleus, while the scientist discovered the positive protons inside the nucleus.
9. The modern periodic table consists of horizontal periods and vertical groups.
10. The type of bond in the water molecule is, while the bond between water molecules is
11. When the temperature of water becomes less than 4°C , its volume, while its density
12. Sodium is kept under the surface of so, as not to react with
13. and are metals which don't react with water.
14. Elements of s-block are located on the of the periodic table and they are arranged in groups.
15. Dissolving basic oxides in water produces, while dissolving acidic oxides in water produces
16. The period number represents, while the group number represents
17. The strongest metal is and lies in group
18. The strongest non-metal is and lies in group
19. The atmospheric pressure is the of air column and is measured in unit.
20. As we go up to the top of the mountain, the atmospheric pressure
21. The atmosphere consists of 4 layers which are,, and

22. The region between the first layer and second layer is called
23. The temperature of troposphere as going up until it reaches
24. The air in the troposphere moves, while in the it moves horizontally.
25. Troposphere layer contains about of the mass of the atmospheric air and about of atmospheric water vapor.
26. layer is found in the upper part of stratosphere which absorbs rays emitted from the sun.
27. Most of the weather features occur in the
28. Ionosphere is important in and is surrounded by two magnetic belts known as
29. The atmospheric pressure at sea level equals mb.
30. are used in measuring the atmospheric pressure.
31. is the region between mesosphere and thermosphere.
32. Ozone layer is found in layer, while meteors are burnt in layer.
33. the thickness of stratosphere is, while that of mesosphere is
34. is the coldest layer in the atmosphere, while is the hottest layer.
35. The ozone layer is found in the layer at a height of above the sea level.
36. The breaks the bond in the oxygen molecules to give
37. The scientist postulated that the thickness of the ozone layer is only
38. The pollutants of the ozone layer are, and
39. result from burning the fuel of the concord airplanes.
40. The ozone hole is found at the pole and increases every in each year.
41. The most important greenhouse gases are,, and
42. The ultraviolet rays are three kinds which are, and
43. The ozone layer doesn't allow the penetration of all ultraviolet rays.
44. are used in extinguishing fires and is used as coolant in cooling devices
45. UV rays have effect, while infrared rays have effect.
46. Archaeopteryx represents the link between and
47. Fossils are used in exploration and determination of the age of

48. is an example of microfossils.
49. and are examples of fossils of complete bodies.
50. is an example of cast fossils while and are examples of the petrified fossils.
51. were the first vertebrates that appeared which are followed by
52. and are from examples of mold fossils.
53. Radiolarian fossil is an example of, but amber fossil is an example of
54. indicate the extinction of species of living organisms.
55. and are from the factors of mass extinction.
56., and are from the factors of recent extinction.
57. destroys the forests trees, while chemical insecticides break down
58., and from the natural disasters that threaten living organisms.
59. and are endangered birds, while and are endangered mammals.
60. is an example of endangered plants in Egypt which is used by pharaohs in manufacturing
61. Dodo bird is bird, while bald eagle is bird.
62. plant is the food of panda bear and it doesn't blossom except once every.....
63. are safe areas established to protect the living organism from extinction.
64. and are examples of extinct animals.
65. protectorate in USA, where is protected.

2) Write the scientific term for the following:

1. A table in which the elements are arranged according to their atomic weights. (.....)
2. A table in which the elements are arranged according to their atomic numbers and the way of filling the energy sublevels with electrons. (.....)
3. Elements where their valency shell contains more than 4 electrons. (.....)
4. The block that contains the series of lanthanides and actinides. (.....)
5. The ability of the atom in a covalent molecule to attract electrons of the chemical bond toward itself. (.....)

6. The kind of bond which binds oxygen atom with hydrogen atom in water molecule. (.....)
7. Descending arrangement of metals according to their chemical activity. (.....)
8. They are symbolized by letters s, p, d and f. (.....)
9. The measuring unit of the atomic size of an element. (.....)
10. A good polar solvent for most of ionic compounds and some of covalent compounds. (.....)
11. Adding any substance to the water which changes its properties, affects the health and life of living organisms. (.....)
12. The change in water properties by adding any substance. (.....)
13. The apparatus which is used for water electrolysis. (.....)
14. Elements have properties of metals and non-metals. (.....)
15. A kind of water pollution, which causes many diseases as typhoid. (.....)
16. A type of water pollution originated from discharging of factories wastes and sewage in canals, rivers and seas. (.....)
17. It is a weak electrostatic attraction force that arises between the molecules of polar compounds. (.....)
18. Weight of air column of an atmospheric height on unit area. (.....)
19. The gaseous envelope that surrounds the earth and rotates around its axis. (.....)
20. A phenomenon that appears as brightly colored light curtains at both poles of the earth. (.....)
21. Two magnetic belts surrounding ionosphere and play an important role in scattering harmful charged cosmic radiation. (.....)
22. An instrument used by pilots to know the elevation from the sea level. (.....)
23. The curved lines that join the points of equal atmospheric pressure. (.....)
24. An atmosphere layer in which the air moves vertically. (.....)
25. The hottest layer in the atmosphere. (.....)
26. The region in which the atmosphere is inserted with outer space. (.....)
27. The region between stratosphere and mesosphere at which the temperature remains constant. (.....)
28. An insecticide used for the preservation of crops. (.....)

29. A molecule is formed combining an atom of an element to a molecule of the same element.
(.....)
30. A phenomenon that occurs due to the increase in the percentage of CO₂ gas and leads to an increase in the planet Earth's temperature. (.....)
31. A unit that measures the degree of ozone. (.....)
32. Compounds that are known commercially as Freon. (.....)
33. The region in which satellites orbit around the earth planet. (.....)
34. A molecule produced from the union of an oxygen atom and its molecules. (.....)
35. A layer which plays an important role in wireless communication. (.....)
36. A charged layer which reflects radio waves. (.....)
37. A type of UV radiation that is absorbed completely (100 %) by the ozone layer. (.....)
38. It indicates the activity of the old living organism during its life. (.....)
39. Parts that indicate the remains of the living organism after death. (.....)
40. Traces and remains of old living organism which are preserved in sedimentary rock.
(.....)
41. It is solidified resinous matter which was secreted by pine trees in the old geographical ages.
(.....)
42. It is the replica of the internal details of a skeleton of an old living organism. (.....)
43. It is the replica of the external details of a skeleton of an old living organism. (.....)
44. They are fossils in which minerals replace the organic matter for organism part leaving the shape without any change. (.....)
45. The process of replacing the wood material of trees by silica to form petrified wood part by part.
(.....)
46. They are fossils of organisms that had lived for short time in the past and a wide geographical distribution then became extinct. (.....)
47. The fossils that are found in the limestone rocks of Mokattam mountain which indicates it was a sea floor since more than 35 million years ago. (.....)
48. Fossils links between reptiles and birds. (.....)
49. Fossils used in the determination of the age of sedimentary rocks. (.....)
50. The continuous decrease in the number of the same species of a living organism. (.....)

51. Excessive hunting of the wild animals to get their furs and skins. (.....)
52. A bird that became endangered because it feed on fish that contain poison in their bodies.
(.....)
53. It is the path of energy that transfers from a living organism to another. (.....)
54. An ecosystem that has a few number and it is severely affected by the absence of one of its species. (.....)
55. Safe places that are specified to protect the endangered species in their homeland. (.....)
56. The first protectorate that has been established in Egypt and it is characterized by rare coral reefs and colored fish. (.....)
57. An aquatic plant used by pharaohs to manufacture writing papers. (.....)

3) Mention one use of:

1. Hoffmann's voltameter:
2. Cobalt 60:
3. Liquefied nitrogen:
4. Liquid sodium:
5. Silicon slides:
6. Methyl bromide gas:
7. Halons:
8. Freon:
9. Aneroid:
10. Altimeter:
11. Fossils:
12. Fern fossil:
13. Coral fossil:
14. Nummulite fossil:
15. Radiolarian fossil:

4) Mention one example for:

1. Halogen exists in a liquid state.
2. The strongest metallic element.
3. A metalloid element.

4. Amphoteric oxide.
5. Covalent compound cannot dissolve in water.
6. A greenhouse gas.
7. Trace fossil.
8. A mold fossil.
9. A cast fossil.
10. Petrified fossil.
11. Microfossils which is considered a guide for existence of petroleum.
12. Fossil of a complete body.
13. An extinct bird recently.
14. An endangered bird.
15. An endangered mammal.
16. An endangered plant.
17. Fossils are found in El-Mokattam mountain.

5) Give reason for each of the following:

1. The atomic size decreases in periods by increasing the atomic number?
2. Liquefied nitrogen is used in preservation of cornea of the eye?
3. Cobalt 60 is used in food preservation?
4. Silicon slides are used in making electronics as computers?
5. Don't store tap water in empty plastic bottles of mineral water?
6. Water and ammonia are from polar compounds?
7. Water density decreases on freezing?
8. Sugar dissolves in water?
9. Although water of oceans freezes at polar zones, the aquatic creatures are still alive?
10. Cesium is the strongest metallic element?
11. The atomic size of (${}_3\text{Li}$) is greater than that of (${}_4\text{Be}$)?
12. Elements of the same group have the same properties?
13. Pure water doesn't affect litmus paper?
14. Adding drops of dilute acid to water during its electrolysis?
15. Water has high boiling point and freezing point?

16. Bromine cannot replace chlorine in sodium chloride?
17. Reaction of potassium with water is stronger than that of sodium with water?
18. The ozone layer acts as a protective shield for living organisms?
19. The atmosphere pressure decreases by increasing the height above the sea level?
20. All weather conditions take place in the troposphere layer?
21. Pilots prefer to fly their planes at the lower part of stratosphere layer?
22. Stopping producing concord aeroplanes?
23. The temperature increases gradually in the stratosphere layer?
24. Mesosphere is the coldest layer?
25. Mesosphere is highly rarefied (vacuumed)?
26. Ionosphere is important for radio stations?
27. Occurrence of aurora phenomenon?
28. The ozone layer is formed in the stratosphere layer?
29. We should not overuse halons and CFC compounds?
30. The greenhouse gases have a bad effect on the earth?
31. Global warming phenomenon has negative effects?
32. The phenomenon, ozone hole, increases in September each year?
33. Governments put laws for regulating the process of hunting of some living organisms?
34. Dodo bird was an easy target for hunters?
35. The simple ecosystem is significantly affected by the absence of one of its species?
36. Amber is considered a suitable medium for formation of complete body fossils?
37. Mammoth fossil is preserved as a complete body fossil?

6) What happens when....?

1. Drinking water polluted with mercury?
2. Eating fish which contains high concentration of lead?
3. Storing water in plastic bottles of mineral water?
4. Putting a magnesium strip in a test tube containing oxygen?
5. Decrease in water temperature less than 4 °C?
6. Dissolving magnesium oxide in water then adding drops of litmus solution to it?

7. There is no difference in electronegativity between hydrogen atom and oxygen atom in water molecule?
8. Element loses an electron?
9. Ascending up in troposphere layer (concerning temperature and atmospheric pressure)?
10. Existence of ozone in conditions of standard temperature and pressure (STP)?
11. Overuse of Freon or increasing the use of CFCs on Earth?
12. Ozone layer disappeared?
13. Meteors move at very high velocity in mesosphere layer?
14. Dipping the old insects in amber?
15. Silica matter replaces wood material part by part of an old tree?
16. Mixing of animal and human wastes in water?

7) Locate the position of the following elements in the modern periodic table:

1. $^{20}_{10}\text{Ne}$
2. $^{40}_{20}\text{Ca}$
3. $^{32}_{16}\text{S}$
4. $^{14}_7\text{N}$

8) Compare between each of the following:

1. Mendeleev's periodic table and modern periodic table.
2. Halogens and alkali metals.
3. Basic oxides and acidic oxides.
4. Metals and non-metals
5. Remains and traces.
6. Mold and cast.
7. Simple ecosystem and complicated ecosystem.
8. Reasons of old extinction and recent extinction.

9) What is meant by:

1. Chemical activity series.
2. Polar compounds.
3. Metalloids.
4. Atmospheric pressure

5. Aurora phenomenon
6. Exosphere region
7. Ionosphere
8. Isobar
9. Mesopause
10. Van-Allen belts
11. Greenhouse gases
12. Greenhouse effect
13. Ozone hole
14. Global warming
15. Fossils
16. Extinction
17. Natural protectorate

10) Mention the name of the scientist who discovered:

1. Protons inside nucleus.
2. Added zero group to the periodic table.
3. Main energy levels.
4. Normal degree of ozone.

11) Complete the following chemical equations:

1. $\text{Na} + \text{H}_2\text{O} \rightarrow \dots + \dots$
2. $2\text{NaBr} + \text{Cl}_2 \rightarrow \dots + \dots$
3. $\text{Mg} + 2\text{HCl} \rightarrow \dots + \dots$
4. $\text{Cu} + 2\text{HCl} \rightarrow \dots + \dots$
5. $\text{Zn} + 2\text{HCl} \rightarrow \dots + \dots$
6. $\dots + \dots \rightarrow 2\text{KBr}$
7. $\text{MgO} + \text{H}_2\text{O} \rightarrow \dots$
8. $\text{SO}_2 + \text{H}_2\text{O} \rightarrow \dots$

12) Write the balanced chemical equations:

1. Burning a piece of coal in air.
2. Carbon dioxide with water

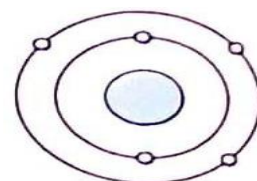
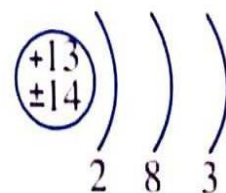
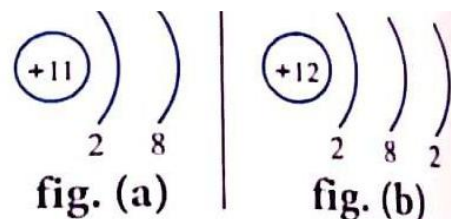
3. Sodium bromide with chlorine
4. Potassium iodide with bromine.
5. Reaction of sodium with water.
6. Magnesium with dilute hydrochloric acid.
7. The formation of ozone by the effect of ultraviolet radiation.
8. Decomposition of acidified water by electricity (electrolysis of water).

13) Solve the following problems:

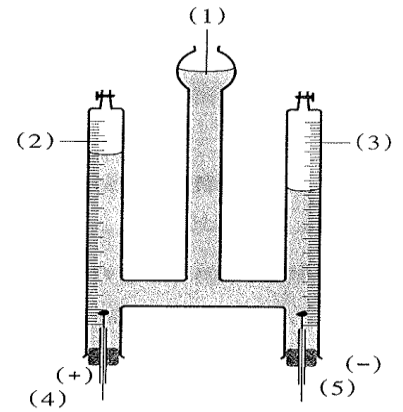
1. **Find the temperature** at a point of height 2000 meters above the sea level if the temperature at the sea level is 23 °C.
2. Calculate the temperature at a base of a mountain, if its height is 6 km and the temperature at its top is 10 °C.
3. Calculate the height of a mountain if the temperature at its base 25 °C and its top -14 °C
4. Calculate the percentage of erosion of ozone layer in a certain area, knowing that ozone degree at this area is 255 Dobson.

14) Answer the following

1. a) Which figure represent a positive ion?
b) Which figure represents a neutral atom?
c) Determine the position of the atom in the periodic table
2. Look at the opposite figure, then find the location of this element in the modern periodic table. Mention the block of this element.
3. a) calculate the atomic number of the element follows it in the same period?
b) calculate the atomic number of the element follows it in the same group?



4. a) The name of this apparatus is
- b) The apparatus is used to
- c) Label the numbers (1), (2), (3), (4), and (5)?
- d) If the volume of the gas evolved at the negative pole is 40 cm³, the
Volume of the gas evolved at the positive pole is



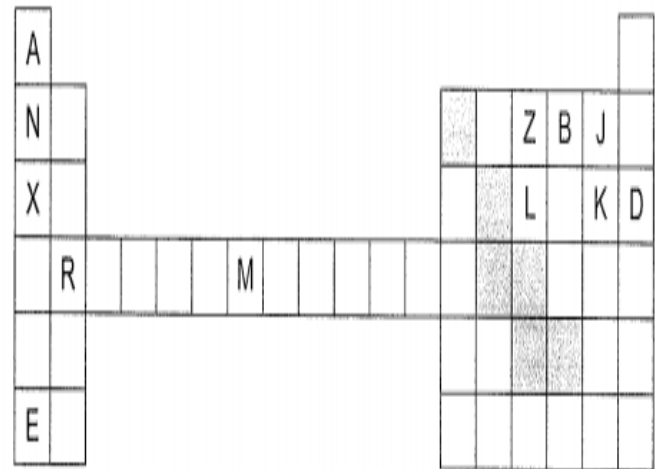
5. Arrange the following:

Fossils starting with first appearance on the life stage.

(Mold fossil of fish – Mammoth fossil – Trilobite fossil – Archaeopteryx)

6. Write the letter which represents:

- Transition elements (.....)
- The strongest metal (.....)
- The strongest nonmetal (.....)
- Noble gas (.....)
- The shaded part represents elements



7. Mention three ways to protect water from pollution.

8. Mention three ways to protect living organisms from extinction.

Model Answers

Complete the following:

1. Alkali metals - halogens
2. Transition elements - 4
3. Strong metal – strong non-metal
4. Increases
5. Gaseous – solid
6. Atomic weight – atomic number.
7. He left gaps – corrected Atomic Weight of some elements.
8. Bohr – Rutherford
9. 7 – 18
10. Covalent – hydrogen
11. Increases – decreases
12. Kerosene – air
13. Gold – copper
14. Left side – two
15. Alkalis – acids
16. Number of energy level – number of outermost electrons.
17. Cesium – 1A
18. Fluorine – 7A
19. Weight – bar or millibar
20. Decreases
21. Troposphere – stratosphere – mesosphere – thermosphere
22. Tropopause
23. Decreases – (- 60 °C)
24. Vertical – stratosphere
25. 75 % - 99 %
26. Ozone – harmful UV
27. Troposphere
28. Wireless communication centers – Van-Allen belts
29. 1013.25 millibar
30. Barometers
31. Mesopause
32. Stratosphere – mesosphere
33. 37 Km – 35 Km
34. Mesosphere – thermosphere
35. Stratosphere – 20 Km
36. UV – two free oxygen atoms.
37. Dobson – 3 mm
38. Chlorofluorocarbon compounds – halons – methyl bromide gas
39. Nitrogen oxide
40. South – September
41. Carbon dioxide – water vapor - Chlorofluorocarbon – nitrous oxide
42. Near UV – Medium UV – Far UV
43. Far
44. Halons - Chlorofluorocarbon compounds
45. Chemical – thermal
46. Reptiles – birds
47. Petroleum – sedimentary rocks
48. Foraminifera
49. Mammoth – amber
50. Ammonite – dinosaur eggs – dinosaur tooth
51. Fish – amphibians
52. Nummulite – trilobite
53. microfossils – complete body
54. Fossils
55. Meteorites impact with earth – long glacial age
56. Overhunting – environmental pollution – destroying natural habitats
57. Acidic rains – the food chain
58. Volcanoes – earthquakes – high marine tide
59. Ibis bird – bald eagle
60. Papyrus – writing papers
61. Extinct – endangered
62. Bamboo – 100 years
63. Natural protectorates
64. Dinosaurs – mammoth
65. Bluestone – grey bear

Write the scientific term for the following:

1. Mendeleev's periodic table
2. Modern periodic table
3. Non-metals
4. F-block
5. Electronegativity
6. Covalent bond
7. Chemical activity series
8. Energy sublevels
9. Picometer
10. Water
11. Water pollution
12. Water pollution
13. Hoffman's voltmeter
14. Metalloids
15. Biological pollution
16. Chemical pollution
17. Hydrogen bond
18. Atmospheric pressure
19. Atmospheric envelope
20. Aurora phenomenon
21. Van – Allen belts
22. Altimeter
23. Isobar
24. Troposphere
25. Thermosphere
26. Exosphere
27. Stratopause
28. Methyl bromide gas
29. Ozone molecule
30. Global warming phenomenon
31. Dobson
32. Chlorofluorocarbons
33. Exosphere
34. Ozone molecule
35. Ionosphere
36. Ionosphere
37. Far UV rays
38. Trace fossils
39. Remain fossils
40. Fossils
41. Amber
42. Mold fossil
43. Cast fossil
44. Petrified fossils
45. Petrification
46. Index fossils
47. Nummulite fossils

48. Archaeopteryx fossils
49. Index fossils
50. Extinction
51. Overhunting

52. Bald eagle bird
53. Food chain
54. Simple ecosystem
55. Natural protectorate

56. Ras-Mohamed protectorate
57. Papyrus plant

Mention one use of:

1. Used for electrolysis of water into its elements.
2. Used in food preservation.
3. Used in preservation of the cornea of the eye.
4. Used for transferring heat from inside the nuclear reactor to outside.
5. Used in the manufacturer of electronic devices.
6. Used as an insecticide to preserve stored agriculture crops.
7. Used in extinguishing fires.
8. Used as a cooling substance in air conditioning sets.
9. Used to determine the possible day weather based on the atmospheric pressure.
10. Used in aeroplanes to measure the altitude of an object at a certain height based on the atmospheric pressure.
11. Fossils can show scientists: What kind of organisms lived in the past? How the environment has changed with time? How organisms have changed with time?
12. They indicate that the environment where they were hot & rainy tropical.
13. They indicate that the environment where they were clear warm shallow seas.
14. found in Mokattam Mountain and they indicate that this area was a sea floor more than 35 million years ago.
15. It is important in petroleum exploration.

Mention one example of:

- | | | |
|---------------------------------|---|-----------------------------|
| 1. Bromine | 8. Nummulite – trilobite | 13. Dodo bird |
| 2. Cesium | 9. Trilobite | 14. Bald eagle – ibis bird |
| 3. Silicon or Boron | 10. Petrified dinosaur tooth or petrified dinosaur eggs | 15. Panda bear – rhinoceros |
| 4. Aluminum oxide or zinc oxide | 11. Foraminifera – radiolarian | 16. Papyrus plant |
| 5. Oil | 12. Mammoth fossils – amber fossils | 17. Nummulite fossils |
| 6. Carbon dioxide | | |
| 7. Worm's tunnel fossil | | |

Give reason for each of the following:

1. Because by increasing the atomic number (in periods from left to right), the attraction force between the nucleus and the outermost electrons increases.
2. Due to the decrease in its boiling point (-196°C).
3. Because it emits gamma rays which prevent the reproduction of microbial cells without harm for the human.
4. Because it is a semi-conductor, its ability to conduct electricity depends on its temperature.
5. Because plastic reacts with chlorine gas (which is used as water disinfectant) leading to the increase in the infection rates by cancer.
6. Because the difference in electronegativity between the elements forming their molecules is relatively high.
7. Because when the temperature of water becomes less than 4°C , water molecules are collected together by hydrogen bonds forming hexagonal ice crystals with many spaces between them, so its volume increases and density decrease.
8. Because sugar molecules can make hydrogen bonds with water molecules.

9. Because when water freezes, its density decreases and float on the surface and this provides the creatures with the chance to be still alive.
10. Because it is the largest atomic size, so it can lose its valency electron easily.
11. Because by increasing the atomic number (in periods from left to right), the attraction force between the nucleus and the outermost electrons increases.
12. Because elements of the same group have the same number of electrons in the outermost energy level.
13. Because pure water is formed of equal numbers of (H⁺) (which gives the acidic property) and (OH⁻) (which gives the basic property).
14. Because pure water is a bad conductor of electricity, while acidified water is a good conductor of electricity.
15. Due to the presence of hydrogen bonds between water molecules.
16. Because chlorine is more active than bromine $\text{Cl}_2 + 2\text{KBr} \rightarrow 2\text{KCl} + \text{Br}_2$
17. Because potassium has larger atomic size than sodium, so it can lose its valency electron easily.
18. Because it prevents far harmful UV and most of the medium UV from reaching to the Earth.
19. Because as the height above the sea level increases, the weight of air column decreases.
20. Because it contains about 75 % of the mass of atmospheric envelope.
21. Because there are no weather turbulences occurs in this layer and the air moves horizontally.
22. Because their exhausts contain nitrogen oxides that affect the ozone layer.
23. Due to the absorption of UV rays (emitted from the sun) by ozone layer.
24. Because the temperature decreases at a high rate until it reaches (-90 °C) at its top.
25. Because it contains limited quantities of helium and hydrogen gases only.
26. Because it reflects radio waves transmitted by radio stations and communication centers.
27. Due to scattering of harmful charged cosmic radiations away from the Earth by Van-Allen belts.
28. Because stratosphere layer contains a suitable amount of oxygen gas, faces UV radiations emitted from sun.
29. Because halons and CFCs compounds cause the erosion of ozone layer.
30. Because increasing the concentration of greenhouse gases make trapping of IR radiation which cause rise in the temperature of the Earth.
31. Because it causes melting the snow of the two poles and sever climate changes.
32. Because all pollutants assemble as black clouds that are pushed by wind towards south pole making ozone depletion increase in September of each year.
33. To protect the endangered living organisms from the danger of extinction.
34. Due to is an easy target for hunters due to: Reduced size of its wings, so it is non-flying bird and Short legs, so it can't run fast.
35. Because it is an ecosystem that has a few members and it is severely affected by the absence of one of its species.
36. Because it preserved the bodies of insects inside it from decomposition.
37. Because when it died, it was rapidly buried in snow which preserved it from decomposition.

What happens when...?

1. It causes blindness.
2. It causes death of brain cells.
3. plastic reacts with chlorine gas (which is used in water disinfection) leading to increase in the occurrence rates of cancer.
4. It burns with a bright light and magnesium oxide powder is formed $2\text{Mg} + \text{O} \rightarrow 2\text{MgO}$

5. water molecules are collected together by hydrogen bonds forming hexagonal ice crystals with many spaces between them, so its volume increases and density decrease.
6. It will form magnesium hydroxide which will turn litmus solution into blue $\text{MgO} + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2$.
7. Water will be non-polar compound.
8. It will change into positive ion.
9. The temperature will decrease by (-6.5°C) for each 1 km above sea level and the pressure will decrease as we move up.
10. Thickness of ozone layer will be only 3 mm.
11. It will increase the rate of erosion of ozone layer.
12. Medium and far UV rays will reach the surface of the Earth and cause harmful effects.
13. Luminous meteors are formed as a result of their friction with air molecules.
14. The bodies of insects are preserved inside it from decomposition.
15. It will change into petrified wood.
16. It will cause biological pollution which may leads to typhoid, bilharzia and hepatitis diseases.

Locate the position of the following elements in the modern periodic table:

1. Period 2 / zero group.
2. Period 4 / group 2A.
3. Period 3 / group 6A.
4. Period 2 / group 5A.

Compare between each of the following:

Mendeleev's periodic table	Modern periodic table
Elements are classified according to atomic weights	Elements are classified according to atomic number and way of filling the energy sublevels with electrons

Halogens	Alkali metals
<ul style="list-style-type: none"> - Belongs to P-block - They are bad conductors of heat and electricity 	<ul style="list-style-type: none"> - Belongs to S-block - They are good conductors of heat and electricity

Basic oxides	Acidic oxides
<ul style="list-style-type: none"> - They are metal oxides - They are formed by the reaction of metal with oxygen - Dissolve in water giving alkalis - Their solutions turn litmus solution into blue. - Example: Na_2O & MgO 	<ul style="list-style-type: none"> - They are non-metal oxides - They are formed by the reaction of non-metal with oxygen - Dissolve in water giving acids - Their solutions turn litmus solution into red. - Example: CO_2 & SO_2

Metals	Non-metals
<ul style="list-style-type: none"> - Have less than 4 electrons in their outermost energy levels - Tend to lose electrons and change into positive ion - React with oxygen forming basic oxides 	<ul style="list-style-type: none"> - Have more than 4 electrons in their outermost energy levels - Tend to gain electrons and change into negative ion - React with oxygen forming acidic oxide

Remains	Traces
Parts that indicate the remains of an old living organism after death.	It indicates the activity of the old living organism during its life.

Mold	Cast
It's the replica of the internal details of a skeleton of an old living organism.	It's the replica of the external details of a skeleton of an old living organism.

Simple ecosystem	Complicated ecosystem
It is an ecosystem that has a few members and it is severely affected by the absence of one of its species.	It is an ecosystem that has multiple members and it is not affected much by the absence of one of its species.

Reasons of old extinction	Reasons of recent extinction
<ol style="list-style-type: none"> 1. Meteorites impacts with Earth 2. Long glacial age 3. The violent movement of the Earth 	<ol style="list-style-type: none"> 1. Destroying natural habitat 2. Overhunting 3. Environmental pollution

What is meant by:

1. it is a series in which metals are arranged in a descending order according to their chemical activity.
2. They are covalent compounds in which the difference in electronegativity between their elements is relatively high.
3. It is a chemical element that exhibits some properties of metals and some of nonmetals.
4. It is the weight of air column of an atmospheric height on a unit area (1 m^2).
5. it is the phenomenon that appears as brightly colored light curtains seen at both poles (the North and South poles) of the Earth.
6. it is a region in which the atmospheric envelope is inserted in outer space.
7. it is the layer that contains charged ions and it has an important role in wireless communication centers.
8. it is the curved lines that join the points of equal pressure in atmospheric pressure maps.
9. It is the region between mesosphere and thermosphere.

10. they are two magnetic belts surrounding ionosphere and play an important role in scattering harmful charged cosmic radiations.
11. They are gases which make trapping of infrared radiation in the troposphere layer which cause the increase in the Earth's temperature.
12. it is the trapping of infrared radiation in the troposphere layer due to the increase in the % of greenhouse gases which cause the increase in the Earth's temperature.
13. Thinning or losing parts of ozone layer above the south pole.
14. it is the continuous increase in the average temperature of the Earth's near-surface air.
15. They are traces or remains of old living organisms that preserved in sedimentary rock.
16. It is the continuous decrease without compensation in the number of certain species of living organisms until all members of species die out.
17. They are safe areas established to protect endangered species in their homeland.

Mention the name of the scientist who discovered:

- | | |
|---------------|-----------|
| 1. Rutherford | 3. Bohr |
| 2. Moseley | 4. Dobson |

Complete the following chemical equations:

1. $\text{Na} + \text{H}_2\text{O} \rightarrow \text{NaOH} + \text{H}_2$
2. $2\text{NaBr} + \text{Cl}_2 \rightarrow \text{NaCl} + \text{Br}_2$
3. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$
4. $\text{Cu} + 2\text{HCl} \rightarrow \text{No Reaction}$
5. $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$
6. $2\text{K} + \text{Br}_2 \rightarrow 2\text{KBr}$
7. $\text{MgO} + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2$
8. $\text{SO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{SO}_3$

Write the balanced chemical equations:

1. $\text{C} + \text{O}_2 \rightarrow \text{CO}_2$
2. $\text{CO}_2 + \text{H}_2\text{O} \rightarrow \text{H}_2\text{CO}_3$
3. $2\text{NaBr} + \text{Cl}_2 \rightarrow 2\text{NaCl} + \text{Br}_2$
4. $2\text{KI} + \text{Br}_2 \rightarrow 2\text{KBr} + \text{I}_2$
5. $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$
6. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$
7. $\text{O}_2 + \text{UV} \rightarrow 2\text{O}$
 $\text{O} + \text{O}_2 \rightarrow \text{O}_3$
8. $2\text{H}_2\text{O} \rightarrow 2\text{H}_2 + \text{O}_2$

Solve the following problems:

1. Temperature at top = temperature at foot – (h x 6.5) = 23 – (2 x 6.5) = 10 °C
2. Temperature at base = temperature at top + (h x 6.5) = 10 + (6 x 6.5) = 49 °C
3. Height = $\frac{\text{Temperature at foot} - \text{temperature at top}}{6.5} = \frac{25 - (-14)}{6.5} = \frac{39}{6.5} = 6 \text{ Km}$
4. The degree of erosion of ozone layer in an area = 300 – 225 = 45 dobson
The percentage of erosion of ozone layer in this area = $\frac{45}{300} \times 100 = 15\%$

Answer the following:

1. a) fig (a) b) fig (b) c) period (3) group (2A)
2. period 3 – group (3A) – P block elements
3. atomic number of the element follows it in the same period = 6
atomic number of the element follows it in the same group = 13
4. a) Hoffmann's voltameter b) Used for electrolysis of water into its elements
c) (1) is acidified water (2) is oxygen (3) is hydrogen (4) anode (5) cathode
d) 20 cm³
5. Answer: Trilobite → Mold fossil of fish → Archaeopteryx → Mammoth
Trilobite is from invertebrates that appeared in seas
Fish were the first vertebrates
Archaeopteryx links between reptiles and birds which appeared after fish
Mammoth is from the mammals that appeared after reptiles.
6. a) M b) E c) J d) D e) metalloid
7. Don't store the tap water in empty plastic bottles.
Prevention of getting rid of sewage, wastes of factories and dead animals in water
Developing the stations of water purification
Disinfection of the drinking water tanks
8. Establishing natural protectorates areas.
Increasing awareness about the importance of natural life
Establishing gene banks for much endangered species.

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



خطوة 1



خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6